

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR MANAGEMENT**

**C & D Technologies, Inc.
200 West Main Street
Attica, Indiana 47918**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F 045-11285-00008	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary custom industrial battery manufacturing source

Authorized Individual: C. Dale Brown
Source Address: 200 West Main Street, Attica, Indiana 47918
Mailing Address: P.O. Box 279, Attica, Indiana 47918-0279
Phone Number: 765 - 762 - 2461
SIC Code: 3691
County Location: Fountain
County Status: Attainment for all criteria pollutants
Source Status: Federally Enforceable State Operating Permit (FESOP)
Minor Source, under PSD Rules;
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

Oxide Mill

- (a) One (1) oxide mill, combustion exhausting through Stack 112, consisting of a Barton Pot, known as EU 0011A, equipped with two (2) baghouses in series, known as 011B and 011C, exhausting through Stacks 110 and 111, installed in 1978, last modified May 25, 1978, and 3-process central vac, known as Maint2000A, exhausting through Stack 113, installed in 1980, capacity: 1,800 pounds of lead ingots per hour, limited by the formation bottleneck to 958,964 pounds (73% of capacity) per month.

Casting

- (b) One (1) small parts casting operation, known as EU 0100A, installed in 1977, equipped with a Farr 48D cartridge dust collector, to be installed, exhausting through Stack 195, capacity: 1,446 pounds of lead pigs per hour, limited by the formation bottleneck to 214,851 pounds (20.3% of capacity) per month.
- (c) One (1) small parts flaming operation, known as EU 0100B, installed in 1977, last modified October 13, 1977, exhausting through Stack 4, to be exhausted through Stack 195, equipped with a Farr 48D cartridge dust collector, to be installed, capacity: 488 pounds of small parts per hour, limited by the formation bottleneck to 214,851 pounds (60.15% of capacity) per month.
- (d) One (1) grid casting operation, known as EU 0200A, installed in 1977, equipped with a Farr 60LL cartridge dust collector, to be installed, exhausting through Stack 196, capacity: 5,197 pounds of lead pigs per hour, limited by the formation bottleneck to 1,886,883 pounds (49.7% of capacity) per month.

- (e) Four (4) natural gas-fired grid curing ovens, known as EU 0200B through EU 0200E, to be installed, exhausting through Stacks 226 - 229, respectively, rated at 0.140 million British thermal units per hour each, total process capacity: 3,634 pounds of casted lead grid plates per hour, limited by the formation bottleneck to 1,886,884 pounds (71.1% of capacity) per month.

Pasting

- (f) One (1) positive lead oxide bulk handling operation, known as EU 0300A, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting through Stack 84 to be replaced by Stack 232, capacity: 1,526 pounds of positive lead oxide per hour, limited by the formation bottleneck to 689,752 pounds (61.9% of capacity) per month.
- (g) One (1) positive oxide storage, known as EU 0300A, equipped with a Pneumatics Bin Vent HEPA filter, to be installed, exhausting through Stack 232, capacity: 2,088 pounds of positive lead oxide per hour, limited by the formation bottleneck to 1,191,581 pounds (78.2% of capacity) per month.
- (h) One (1) negative lead oxide bulk handling operation, known as EU 0300B, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting through Stack 85, capacity: 1,526 pounds of negative lead oxide per hour, limited by the formation bottleneck to 665,336 pounds (59.7% of capacity) per month.
- (i) One (1) negative oxide storage, known as EU 0300Bn, equipped with a Pneumatics Bin Vent HEPA filter, to be installed, exhausting through Stack 233, capacity: 2,016 pounds of positive lead oxide per hour, limited by the formation bottleneck to 973,728 pounds (66.2% of capacity) per month.
- (j) One (1) mixing/pasting operation, known as EU 0300C, installed in 1982, last modified January 31, 1982, equipped with an AAF rotoclone scrubber, exhausting through Stack 158 to be replaced by Stacks 230 and 231, capacity: 5,675 pounds of positive and negative lead oxide, sulfuric acid/water and grids per hour, limited by the formation bottleneck to 2,443,087 pounds (59.0% of capacity) per month.
- (k) One (1) paste mixing system, known as EU 0300C, equipped with a Tri Mer wet scrubber, to be installed, exhausting through Stack 231, capacity: 6,268 pounds of negative and positive lead oxide, expander, and dilute sulfuric acid per hour, limited by the formation bottleneck to 2,150,545 pounds (47.0% of capacity) per month.
- (l) One (1) expander manufacturing operation, known as EU 0300D, installed in 1983, equipped with Farr Model 24 LS dust collector, exhausting through Stack 159, capacity: 312 pounds of lead oxide, carbon black, barytes, and barium sulfate per hour.
- (m) One (1) grid pasting system, known as EU 0300E, equipped with a Sly Manufacturing scrubber, to be installed, exhausting through Stack 230, capacity: 11,663 pounds of positive and negative lead paste and lead grids per hour, limited by the formation bottleneck to 4,037,854 pounds (47.4%) per month.
- (n) Four (4) humidity ovens, known as EU 0300 F, G, H and I, exhausting through Stacks 26, 27, 28 and 29, respectively, total process capacity: 2,012 pounds of lead plates per hour, limited by the formation bottleneck to 1,255,488 pounds (85.5% of capacity) per month.

- (o) Four (4) natural gas-fired Universal curing ovens, known as EU 0300 J, K, L and M, exhausting through Stacks 179, 180, 193 and 194, respectively, rated at 0.800 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour, limited by the formation bottleneck to 1,255,488 pounds (85.5% of capacity) per month.
- (p) Four (4) natural gas-fired OSI universal ovens, known as EU 0500E through EU 0500H, to be installed, exhausting through Stacks 234, 235, 237 and 238, respectively, rated at 0.800 million British thermal units per hour each, total process capacity: 2,456 pounds of lead plates per hour, limited by the formation bottleneck to 1,532,544 pounds (85.5% of capacity) per month.

Three Process Operation

- (q) One (1) 3PO-plate processing operation, known as EU 0700A, installed in 1984, last modified August 6, 1984, equipped with Torit dust collector, exhausting through Stack 127, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (r) One (1) 3PO-plate processing operation, known as EU 0700B, installed in 1993, last modified October 26, 1993, equipped with an OSI dust collector, exhausting through Stack 152, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (s) One (1) 3PO-plate processing operation, known as EU 0700C, installed in 1993, last modified October 26, 1993, equipped with an OSI dust collector, exhausting through Stack 151, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (t) One (1) 3PO-plate processing operation, known as EU 0700D, installed in 1995, last modified October 1, 1995, equipped with a Torit dust collector, exhausting through Stack 175, capacity: 2,754 pounds of plate frames per, hour limited by the formation bottleneck to 955,409 pounds (47.5% of capacity) per month.
- (u) One (1) 3PO-plate processing operation, known as EU 0700E, installed in 1995, equipped with a Torit dust collector, exhausting through Stack 175, capacity: 160 pounds of plate frames per hour, limited by the formation bottleneck to 55,573 pounds (47.5% of capacity) per month.
- (v) One (1) 3PO-L plate assembly operation, known as EU 0800A, installed March 30, 1984, equipped with an American air filter dust collector, exhausting through Stack 140, capacity: 1,444 pounds of cured plates and small parts per hour, limited by the formation bottleneck to 548,720 pounds (52.1% of capacity) per month.
- (w) One (1) 3PO-L plate assembly operation, known as EU 0800B, installed in 1988, last modified April 8, 1988, equipped with an American air filter dust collector, exhausting through Stack 166, capacity: 2,165 pounds of positive and negative plates and small parts per hour, limited by the formation bottleneck to 822,700 pounds (52.1% of capacity) per month.
- (x) One (1) 3PO-L plate assembly operation, known as EU 0800C, installed in 1984, last modified March 30, 1984, equipped with an OSI #10 dust collector, exhausting through Stack 142, capacity: 2,165 pounds of cured plates and small parts per hour, limited by the formation bottleneck to 822,700 pounds (52.1% of capacity) per month.

- (y) One (1) 3PO-MP assembly, known as EU 0800D, installed in 1993, last modified January 1, 1993, equipped with a Torit dust collector, exhausting through Stack 176, capacity: 2,404 pounds of cured plates and small parts and cell covers per hour, limited by the formation bottleneck to 67,112 pounds (3.8% of capacity) per month and 5.662 liters of cover adhesive per month.
- (z) One (1) 3PO-JC/D assembly, known as EU 0800E, installed in 1994, last modified December 5, 1994, equipped with a Torit dust collector, exhausting through Stack 177, capacity: 174 pounds of cured plates and small parts and cell covers per hour limited by the formation bottleneck to 56,550 pounds per month (44.5% of capacity) and 4.943 liters of cover adhesive per month.
- (aa) One (1) 3PO-MCT assembly, known as EU 0800F, installed in 1999, equipped with a Farr 48D dust collector, exhausting through Stack 188, capacity: 3,813 pounds of lead plates and small parts and cell covers per hour, limited by the formation bottleneck to 1,652,300 pounds (59.4% of capacity) per month and 139.875 liters of cover adhesive per month.
- (bb) One (1) L-cell cover adhesive station, known as EU 0800G, installed in 1982, exhausting through Stack 167, capacity: 4,000 pounds of L-cells per hour, limited by the formation bottleneck to 2,195,000 pounds of L-cells and covers per month (75.2% of capacity) and 185.5 liters of cover adhesive per month.
- (cc) One (1) 3PO-L cell cover insert, known as EU 0800H, installed in 1984, last modified March 30, 1984, equipped with two (2) Torit dust collectors, exhausting through Stack 141, capacity: 600 pounds of assembled cells per hour, limited by the formation bottleneck to 153,600 pounds (35.1% of capacity) per month.
- (dd) One (1) LCT 1700 Assembly with two jigs, known as EU 0800K, to be installed, equipped with a Farr dust collector, exhausting through Stack 244, capacity: 1,302 pounds of plates and small parts and cell covers per hour, limited by the formation bottleneck to 282,100 pounds (29.7% of capacity) per month and 23.8 liters of cover adhesive per month.

Formation

- (ee) One (1) tank dry formation, known as EU 0900A, installed in 1990, last modified March 5, 1990, equipped with a scrubber, exhausting through Stack 178, capacity: 200 pounds of lead plates per hour.
- (ff) One (1) tank wet formation, known as EU 0900B, installed in 1990, capacity: 3,420 pounds of dry batteries per hour (fugitive).
- (gg) One (1) tank wet formation, known as 0900C, to be installed, capacity: 2,215 pounds of completed dry cells per hour (fugitive).

Central Vac

- (hh) One (1) central vacuum #2, known as Maint2000B, installed October 6, 1980, exhausting through Stack 129.
- (ii) One (1) 3 process central vacuum, known as Maint2000C, installed in 1980, exhausting through Stack 130.

- (jj) One (1) 3 process central vacuum , known as Maint2000D, installed in 1980, exhausting through Stack 131.
- (kk) One (1) grid casting central vacuum #5, known as Maint2000E, installed November 19, 1999, exhausting through Stack 224.
- (ll) One (1) pasting central vacuum, known as EU 2000F, to be installed, exhausting through Stack 242.
- (mm) One (1) polyurethane battery topping, known as Misc, installed in 1990, exhausting through Stack 160, capacity: 30 gallons of perchloroethylene per month.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour consisting of fifty-four (54) existing facilities rated at total of 51.85 million British thermal units per hour, including two (2) pasting boilers, exhausting through Stacks 163 and 164, rated at 0.690 and 1.050 million British thermal units per hour, respectively.

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11). A total of thirteen (13) proposed natural gas-fired combustion facilities rated at total of 7.18 million British thermal units per hour are comprised of the eight (8) natural gas-fired grid curing and universal ovens listed under New Emission Units and the following five (5) new insignificant combustion units:

Casting

- (1) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 236, rated at 0.340 million British thermal units per hour.

Pasting

- (2) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 239, rated at 0.340 million British thermal units per hour.

LCT Assembly

- (3) One (1) natural gas-fired rapid air heater, to be installed, exhausting through Stack 245, rated at 1.650 million British thermal units per hour.

Plate Storage Area

- (4) One (1) natural gas-fired universal oven boiler, to be installed, exhausting through Stack 225, rated at 0.340 million British thermal units per hour.

Charging

- (5) One (1) natural gas-fired rapid air heater, to be installed, exhausting through Stack 243, rated at 0.750 million British thermal units per hour.

- (b) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (d) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (e) Cleaning - alcohol, mineral spirits, parts washer; paint; carbon steel welding. VOC less than 3 pounds per hour or 15 pounds per day, PM less than 5 pounds per hour or 25 pounds per day.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions

- (a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAM, when applicable shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

GENERAL CONDITIONS

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-7 shall prevail.

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

(a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.

- (b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source's potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

This permit does not convey any property rights of any sort, or any exclusive privilege.

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall furnish to IDEM, OAM, within a reasonable time, any information that IDEM, OAM, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
- (c) Upon request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any

of the furnished records, the Permittee must furnish such records to IDEM, OAM, along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAM may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, except those specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act and is grounds for:

- (1) Enforcement action;
- (2) Permit termination, revocation and reissuance, or modification; and
- (3) Denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted under this permit shall contain certification by a authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on

the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

- (c) The annual compliance certification report shall include the following:
- (1) The identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was based on continuous or intermittent data;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAM, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Management, Compliance Section), or

Telephone No.: 317-233-5674 (ask for Compliance Section)

Facsimile No.: 317-233-5967

Failure to notify IDEM, OAM, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted notice either in writing or facsimile, of the emergency to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAM, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAM, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ten (10) calendar days from the date of the discovery of the deviation.

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
- (2) An emergency as defined in 326 IAC 2-7-1(12); or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.
- (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)]
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM, determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAM, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM, and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except

those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(2) If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAM, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAM, any additional information identified as needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1) only if a certification is required by the terms of the applicable rule.

(c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-1.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
 - (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAM, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).
- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:
- (1) A brief description of the change within the source;
 - (2) The date on which the change will occur;
 - (3) Any change in emissions; and
 - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAM or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Construction Permit Requirement [326 IAC 2]

A modification, construction, or reconstruction shall be approved if required by and in accordance with the applicable provisions of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-8-5(a)(4)]

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAM, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)]

The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3 if such modifications occur during the term of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD));
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), emissions of particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Overall Source Production Limit [326 IAC 2-8]

(a) The production from the entire source is limited to 51,031,300 pounds of lead in batteries per twelve (12) consecutive month period.

(b) The allowed lead emission rate shall be limited to an amount which in no way will create a violation of the National Ambient Air Quality Standard of 1.5 micrograms of lead per cubic meter averaged over a calendar quarter and measured as elemental lead.

(c) A quarterly summary of the information to document compliance with Condition C.2(a) shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this

permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2. The provisions of 326 IAC 9-1-2 are not federally enforceable.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.7 Fugitive Lead Dust Emissions [326 IAC 15-1-3]

Pursuant to 326 IAC 15-1-3 (Lead emission limitations: control of fugitive lead dust),

- (a) No source shall create or maintain outdoor storage of bulk materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles.
- (b) All materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles shall be transported in closed containers or shall be transported by enclosed conveying systems that are vented to the atmosphere through particulate matter control equipment or shall be transported wet.
- (c) Control programs shall be designed to minimize emissions of lead from all nonprocess fugitive emission points. The programs shall include good housekeeping practices for the cleanup of spills and for minimizing emissions from loading and unloading areas as applicable. Fugitive lead dust shall be controlled according to the plan submitted on December 28, 1999. The plan consists of:
 - (1) All lead oxide bearing material shall be stored inside the plant except for the three (3) outside bulk storage tanks for lead oxide which have dust collectors on top of each tank.
 - (2) The oxide shall be forced into the tanks pneumatically via a semi-trailer bulk tank. Positive oxide will be brought in from outside the plant and put into the tank using an air pump off the semi-tractor. Negative oxide will be brought over to the bulk tank from the oxide mill located on the South West side of the plant via semi-tractor bulk tank. This oxide shall be forced into the bulk tank by an air pump located near the bulk storage tanks.

- (3) Loading of the negative oxide will be performed in the scale house located near the oxide mill. The scale house has one (1) large overhead door on each end of the building allowing entrance and exit. When the semi-trailer is filled it shall be driven around the parking lot on West side of plant to the North end of the plant and backed into the space between the two (2) plant buildings.
- (4) Upon acceptance by C&D's Quality Control personnel of a truck load of lead oxide the following shall be performed:
 - (A) The truck driver shall:
 - (i) Chock the wheels of truck.
 - (ii) Place plastic under the hose coupling in the event small amounts of lead oxide are spilled.
 - (B) The pasting supervisor shall:
 - (i) Insure the bulk storage tank is sufficiently empty, so it can accept the full contents of the truck.
 - (ii) Unlock the lead oxide loading line.
 - (iii) Notify the driver that the unloading may commence.
 - (iv) Fill out "Lead Oxide Unloading Form LOUF-1."
 - (v) Remove himself from the area but within range to watch the start up procedure.
 - (C) The truck driver shall:
 - (i) Perform the hook up procedure.
 - (ii) Insure that a respirator is available in case of a leak.
 - (iii) Begin pumping operation.
 - (iv) Stay with his truck until the unloading procedure is complete.
 - (v) Wear hearing protection if the noise level generated by the pumps motor is equal to or exceeds 90 DBA.
 - (vi) Allow sufficient air to pass through the lines after unloading to insure complete evacuation of the lines.
 - (vii) Unhook his lines. Secure his truck.
 - (D) The pasting supervisor shall:
 - (i) Lock the oxide loading line.
 - (ii) Inspect the area for spills.

- (iii) Release the driver.
 - (iv) Complete and sign the "Lead Oxide Unloading Inspection Form LOUF-1."
 - (v) Present the completed form to the safety coordinator.
- (5) The plant is paved with cement or asphalt in all truck traffic areas with the exception of the back two-thirds (2/3) of the parking lot (chip and seal) and approximately a 100 foot stretch North West of the Plant (gravel and sand). Due to the low potential for lead contamination from oxide bulk semi-trailer handling it is not necessary to clean all paved areas on a scheduled basis. Cleaning shall be on a periodic basis, as required. The oxide loading and unloading areas shall be cleaned on a weekly basis, unless conditions merit more frequent cleaning. The cleaning requirements shall be decided upon by the Plant Environmental Specialist based upon the findings of the daily inspection. If cleanup is required the plant central vacuum system and/or the two (2) Plant Nilfisk vacuums (equipped with H.E.P.A. filters) will be utilized. If the material is too large to be vacuumed, sweeping shall be used only to pick up the larger debris.
- (6) The spill clean up procedures are, but not limited to, the following:
 - (A) Immediately stop all traffic in and around the contaminated area.
 - (B) Utilize the metal spill box near the oxide unloading area, which contains the following material pertinent to an oxide spill.
 - (i) Two (2) rolls of plastic (12' x 50'). This will allow for coverage of contaminated area in case of a breeze or while waiting for an appropriate number of personnel to gather.
 - (ii) Ten (10) disposable respirators for personnel while clean up activities are in progress.
 - (iii) One (1) shovel for picking up oxide and any possible contaminated soil.
 - (iv) Ten (10) sand bags for holding down plastic.
 - (v) Five (5) bags Zor-All for holding down plastic or soaking up puddle of oxide contaminated water.
 - (vi) Drain plug for plugging a drain in case of spill during a precipitation event.
 - (C) The source also has at immediate disposal two (2) Nilfisk vacuums which are equipped with H.E.P.A. filters and a wet vacuum which can be utilized to clean up any wet oxide, or on any paved areas wash down pavement to a diked area and pick up the lead contaminated water. The captured lead contaminated water shall be treated and filtered through the plant wastewater treatment facility. All plant personnel shall be trained on the Spill Prevention Control and Counter measures on a yearly basis.

- (D) In addition the following procedures shall be followed in the event of any spill:
- (i) Any oxide that is spilled shall be reported to the pasting Supervisor.
 - (ii) Immediately shut down equipment, if pertinent to the spill.
 - (iii) Remember that plastic is being provided to catch oxide and should be used for that purpose. During rain, however the plastic shall not be used.

C.8 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.9 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.10 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.11 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM, within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.12 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

- (a) Compliance with applicable requirements for the existing emission units (not the new emission units, known as EU 0200B - E, EU 0300A, Bn, C, E, EU 0500E - H, EU 0800K,

EU 0900C and EU 2000F) shall be documented as required by this permit. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) Compliance with applicable requirements for the new emission units, known as EU 0200B - E, EU 0300A, Bn, C, E, EU 0500E - H, EU 0800K, EU 0900C and EU 2000F, shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.13 Maintenance of Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.14 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.15 Pressure and Flow Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device and the water flow rate, the gauges employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

- (a) Submit:
 - (1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
 - (2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
 - (3) A verification to IDEM, OAM, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.
- (b) Provide annual certification to IDEM, OAM, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.17 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5] [326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been

predicted.

- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.19 Monitoring Data Availability

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements in (a) above.

C.20 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.

- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-8-4(3)(C)]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-Annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

Stratospheric Ozone Protection

C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

Oxide Mill

- (a) One (1) oxide mill, combustion exhausting through Stack 112, consisting of a Barton Pot, known as EU 0011A, equipped with two (2) baghouses in series, known as 011B and 011C, exhausting through Stacks 110 and 111, installed in 1978, last modified May 25, 1978, and 3-process central vac, known as Maint2000A, exhausting through Stack 113, installed in 1980, capacity: 1,800 pounds of lead ingots per hour, limited by the formation bottleneck to 958,964 pounds (73% of capacity) per month.

Casting

- (b) One (1) small parts casting operation, known as EU 0100A, installed in 1977, equipped with a Farr 48D cartridge dust collector, to be installed, exhausting through Stack 195, capacity: 1,446 pounds of lead pigs per hour, limited by the formation bottleneck to 214,851 pounds (20.3% of capacity) per month.
- (c) One (1) small parts flaming operation, known as EU 0100B, installed in 1977, last modified October 13, 1977, exhausting through Stack 4, to be exhausted through Stack 195, equipped with a Farr 48D cartridge dust collector, to be installed, capacity: 488 pounds of small parts per hour, limited by the formation bottleneck to 214,851 pounds (60.15% of capacity) per month.
- (d) One (1) grid casting operation, known as EU 0200A, installed in 1977, equipped with a Farr 60LL cartridge dust collector, to be installed, exhausting through Stack 196, capacity: 5,197 pounds of lead pigs per hour, limited by the formation bottleneck to 1,886,883 pounds (49.7% of capacity) per month.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-5(1)]

D.1.1 Lead Emissions [326 IAC 12, (40 CFR Part 60.370 - 60.374, Subpart KK)]

Pursuant to 40 CFR Part 60.372;

- (a) the lead oxide manufacturing facilities, oxide mill EU 0011A, shall not emit any gases that contain in excess of 0.010 pounds of lead per ton of lead feed,
- (b) the grid casting facilities (EU 0100A, EU 0100B and EU 0200A) shall not emit any gases that contain in excess of 0.000176 grains of lead per dry standard cubic foot of exhaust, and
- (c) the central vac facility (Maint2000A) shall not emit any gases that contain in excess of 0.00044 grains of lead per dry standard cubic foot of exhaust.

D.1.2 Opacity [326 IAC 12, (40 CFR Part 60.370 - 60.374, Subpart KK)]

Pursuant to 40 CFR Part 60.372; the exhaust Stacks (195, 4, 196 and 113) shall be limited to zero (0) percent opacity.

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the;

- (a) oxide mill, known as EU 0011A, shall not exceed 3.82 pounds per hour when operating at a process weight rate of 1,800 pounds per hour.
- (b) small parts casting operation, known as EU 0100A, and the small parts flaming operation, known as EU 0100B, shall not exceed 4.01 pounds per hour when operating at a total process weight rate of 1,934 pounds per hour.
- (c) grid casting operation, known as EU 0200A, shall not exceed 7.77 pounds per hour when operating at a process weight rate of 5,197 pounds per hour.
- (d) The pounds per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.4 PM [326 IAC 2-2]

To avoid the requirements of 326 IAC 2-2 the hourly PM emissions from the individual emissions units shall not exceed the following:

Process	Hourly PM Emission Limit (pounds per hour)
Oxide Mill (EU 0011A) Stacks 110,111,112	0.0106
Small parts flaming (EU 0100 A and B) Stack 195	0.0073
Grid casting operation (EU 0200A) Stack 196	0.0478
Total	0.0657

D.1.5 PM₁₀ [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the hourly PM₁₀ emissions from the individual emission units shall not exceed the following:

Process	Hourly PM ₁₀ Emission Limit (pounds per hour)
Oxide Mill (EU 0011A) Stacks 110,111,112	0.0040
Small parts flaming (EU 0100 A and B) Stack 195	0.0028
Grid casting operation (EU 0200A) Stack 196	0.0182
Total	0.025

- (b) Compliance with these PM_{10} emission limits will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) and 326 IAC 2-2 do not apply.

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements [326 IAC 2-8-5(a)(1)&(4)] [326 IAC 2-1.1-11]

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within twelve (12) months after issuance of this permit, the Permittee shall perform lead and opacity testing of one (1) of the stacks in each group as specified in the following table utilizing methods as approved by the Commissioner to demonstrate compliance with the NSPS Subpart KK requirements of Conditions D.1.1 and D.1.2. These lead and opacity performance tests shall be repeated on a different stack for groups with multiple stacks at least once every two and one-half (2.5) years from the date of the last valid compliance demonstration of the group. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.

EMISSION UNITS GROUPED BY LIKE PROCESSES AND COLLECTION EQUIPMENT		
Group	Emission Unit	Stack
1	EU 0011A	110/111
2	EU 0100A and 0100B	195
3	EU 0200A	196

The Permittee is not required to test these facilities for PM and PM_{10} by this permit. However, IDEM may require compliance testing when necessary to determine if these facilities are in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Conditions D.1.3, D.1.4 and D.1.5 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-6(1)] [326 IAC 2-8-5(1)]

D.1.8 Particulate Matter (PM)

The PM control devices shall be in operation at all times when any of the facilities listed in Section D.1 are in operation.

D.1.9 Visible Emissions Notations

- (a) Daily visible emission notations of the Stacks 110, 111, 112, 195 and 196 exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the oxide mill and the grid casting processes, at least once per day when the oxide mill and the grid casting processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses associated with EU 0011A (Stacks 110 and 111) shall be maintained within the range of 0.5 and 5.0 inches of water or a range established during the latest Stack test. The pressure drop across the baghouses associated with EU 0100A and EU 0200A (Stacks 195 and 196) shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.1.11 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the battery manufacturing operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-8-5(3)] [326 IAC 2-8-19]

D.1.13 Record Keeping Requirements

- (a) To document compliance with Condition D.1.9, the Permittee shall maintain records of daily visible emission notations of the stack exhausts for Stacks 110, 111, 112, 195 and 196.

- (b) To document compliance with Condition D.1.10, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Inlet and outlet differential static pressure; and
 - (B) Cleaning cycle: frequency and differential pressure.
 - (2) Documentation of all response steps implemented, per event.
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (b) To document compliance with Condition D.1.11, the Permittee shall maintain records of the results of the inspections required under Condition D.1.11 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

Grid Casting

- (e) Four (4) natural gas-fired grid curing ovens, known as EU 0200B through EU 0200E, to be installed, exhausting through Stacks 226 - 229, respectively, rated at 0.140 million British thermal units per hour each, total process capacity: 3,634 pounds of casted lead grid plates per hour, limited by the formation bottleneck to 1,886,884 pounds (71.1% of capacity) per month.

Pasting

- (f) One (1) positive lead oxide bulk handling operation, known as EU 0300A, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting through Stack 84 to be replaced by Stack 232, capacity: 1,526 pounds of positive lead oxide per hour, limited by the formation bottleneck to 689,752 pounds (61.9% of capacity) per month.
- (g) One (1) positive oxide storage, known as EU 0300A, equipped with a Pneumatics Bin Vent HEPA filter, to be installed, exhausting through Stack 232, capacity: 2,088 pounds of positive lead oxide per hour, limited by the formation bottleneck to 1,191,581 pounds (78.2% of capacity) per month.
- (h) One (1) negative lead oxide bulk handling operation, known as EU 0300B, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting through Stack 85, capacity: 1,526 pounds of negative lead oxide per hour, limited by the formation bottleneck to 665,336 pounds (59.7% of capacity) per month.
- (i) One (1) negative oxide storage, known as EU 0300Bn, equipped with a Pneumatics Bin Vent HEPA filter, to be installed, exhausting through Stack 233, capacity: 2,016 pounds of positive lead oxide per hour, limited by the formation bottleneck to 973,728 pounds (66.2% of capacity) per month.
- (j) One (1) mixing/pasting operation, known as EU 0300C, installed in 1982, last modified January 31, 1982, equipped with an AAF rotoclone scrubber, exhausting through Stack 158 to be replaced by Stacks 230 and 231, capacity: 5,675 pounds of positive and negative lead oxide, sulfuric acid/ water and grids per hour, limited by the formation bottleneck to 2,443,087 pounds (59.0% of capacity) per month.
- (k) One (1) paste mixing system, known as EU 0300C, equipped with a Tri Mer wet scrubber, to be installed, exhausting through Stack 231, capacity: 6,268 pounds of negative and positive lead oxide, expander, and dilute sulfuric acid per hour, limited by the formation bottleneck to 2,150,545 pounds (47.0% of capacity) per month.
- (l) One (1) expander manufacturing operation, known as EU 0300D, installed in 1983, equipped with Farr Model 24 LS dust collector, exhausting through Stack 159, capacity: 312 pounds of lead oxide, carbon black, barytes, and barium sulfate per hour.
- (m) One (1) grid pasting system, known as EU 0300E, equipped with a Sly Manufacturing scrubber, to be installed, exhausting through Stack 230, capacity: 11,663 pounds of positive and negative lead paste and lead grids per hour, limited by the formation bottleneck to 4,037,854 pounds (47.4%) per month.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-8-4(10)]: Continued

- (n) Four (4) humidity ovens, known as EU 0300 F, G, H and I, exhausting through Stacks 26, 27, 28 and 29, respectively, total process capacity: 2,012 pounds of lead plates per hour, limited by the formation bottleneck to 1,255,488 pounds (85.5% of capacity) per month.
- (o) Four (4) natural gas-fired Universal curing ovens, known as EU 0300 J, K, L and M, exhausting through Stacks 179, 180, 193 and 194, respectively, rated at 0.800 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour, limited by the formation bottleneck to 1,255,488 pounds (85.5% of capacity) per month.
- (p) Four (4) natural gas-fired OSI universal ovens, known as EU 0500E through EU 0500H, to be installed, exhausting through Stacks 234, 235, 237 and 238, respectively, rated at 0.800 million British thermal units per hour each, total process capacity: 2,456 pounds of lead plates per hour, limited by the formation bottleneck to 1,532,544 pounds (85.5% of capacity) per month.

Three Process Operation

- (q) One (1) 3PO-plate processing operation, known as EU 0700A, installed in 1984, last modified August 6, 1984, equipped with Torit dust collector, exhausting through Stack 127, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (r) One (1) 3PO-plate processing operation, known as EU 0700B, installed in 1993, last modified October 26, 1993, equipped with an OSI dust collector, exhausting through Stack 152, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (s) One (1) 3PO-plate processing operation, known as EU 0700C, installed in 1993, last modified October 26, 1993, equipped with an OSI dust collector, exhausting through Stack 151, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (t) One (1) 3PO-plate processing operation, known as EU 0700D, installed in 1995, last modified October 1, 1995, equipped with a Torit dust collector, exhausting through Stack 175, capacity: 2,754 pounds of plate frames per, hour limited by the formation bottleneck to 955,409 pounds (47.5% of capacity) per month.
- (u) One (1) 3PO-plate processing operation, known as EU 0700E, installed in 1995, equipped with a Torit dust collector, exhausting through Stack 175, capacity: 160 pounds of plate frames per hour, limited by the formation bottleneck to 55,573 pounds (47.5% of capacity) per month.
- (v) One (1) 3PO-L plate assembly operation, known as EU 0800A, installed March 30, 1984, equipped with an American air filter dust collector, exhausting through Stack 140, capacity: 1,444 pounds of cured plates and small parts per hour, limited by the formation bottleneck to 548,720 pounds (52.1% of capacity) per month.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-8-4(10)]: Continued

Three Process Operation

- (w) One (1) 3PO-L plate assembly operation, known as EU 0800B, installed in 1988, last modified April 8, 1988, equipped with an American air filter dust collector, exhausting through Stack 166, capacity: 2,165 pounds of positive and negative plates and small parts per hour, limited by the formation bottleneck to 822,700 pounds (52.1% of capacity) per month.
- (x) One (1) 3PO-L plate assembly operation, known as EU 0800C, installed in 1984, last modified March 30, 1984, equipped with an OSI #10 dust collector, exhausting through Stack 142, capacity: 2,165 pounds of cured plates and small parts per hour, limited by the formation bottleneck to 822,700 pounds (52.1% of capacity) per month.
- (y) One (1) 3PO-MP assembly, known as EU 0800D, installed in 1993, last modified January 1, 1993, equipped with a Torit dust collector, exhausting through Stack 176, capacity: 2,404 pounds of cured plates and small parts and cell covers per hour, limited by the formation bottleneck to 67,112 pounds (3.8% of capacity) per month and 5.662 liters of cover adhesive per month.
- (z) One (1) 3PO-JC/D assembly, known as EU 0800E, installed in 1994, last modified December 5, 1994, equipped with a Torit dust collector, exhausting through Stack 177, capacity: 174 pounds of cured plates and small parts and cell covers per hour limited by the formation bottleneck to 56,550 pounds per month (44.5% of capacity) and 4.943 liters of cover adhesive per month.
- (aa) One (1) 3PO-MCT assembly, known as EU 0800F, installed in 1999, equipped with a Farr 48D dust collector, exhausting through Stack 188, capacity: 3,813 pounds of lead plates and small parts and cell covers per hour, limited by the formation bottleneck to 1,652,300 pounds (59.4% of capacity) per month and 139.875 liters of cover adhesive per month.
- (bb) One (1) L-cell cover adhesive station, known as EU 0800G, installed in 1982, exhausting through Stack 167, capacity: 4,000 pounds of L-cells per hour, limited by the formation bottleneck to 2,195,000 pounds of L-cells and covers per month (75.2% of capacity) and 185.5 liters of cover adhesive per month.
- (cc) One (1) 3PO-L cell cover insert, known as EU 0800H, installed in 1984, last modified March 30, 1984, equipped with two (2) Torit dust collectors, exhausting through Stack 141, capacity: 600 pounds of assembled cells per hour, limited by the formation bottleneck to 153,600 pounds (35.1% of capacity) per month.
- (dd) One (1) LCT 1700 Assembly with two jigs, known as EU 0800K, to be installed, equipped with a Farr dust collector, exhausting through Stack 244, capacity: 1,302 pounds of plates and small parts and cell covers per hour, limited by the formation bottleneck to 282,100 pounds (29.7% of capacity) per month and 23.8 liters of cover adhesive per month.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-8-4(10)]: Continued

Formation

- (ee) One (1) tank dry formation, known as EU 0900A, installed in 1990, last modified March 5, 1990, equipped with a scrubber, exhausting through Stack 178, capacity: 200 pounds of lead plates per hour.
- (ff) One (1) tank wet formation, known as EU 0900B, installed in 1990, capacity: 3,420 pounds of dry batteries per hour (fugitive).
- (gg) One (1) tank wet formation, known as 0900C, to be installed, capacity: 2,215 pounds of completed dry cells per hour (fugitive).

Central Vac

- (hh) One (1) central vacuum #2, known as Maint2000B, installed October 6, 1980, exhausting through Stack 129.
- (ii) One (1) 3 process central vacuum, known as Maint2000C, installed in 1980, exhausting through Stack 130.
- (jj) One (1) 3 process central vacuum, known as Maint2000D, installed in 1980, exhausting through Stack 131.
- (kk) One (1) grid casting central vacuum #5, known as Maint2000E, installed November 19, 1999, exhausting through Stack 224.
- (ll) One (1) pasting central vacuum, known as EU 2000F, to be installed, exhausting through Stack 242.
- (mm) One (1) polyurethane battery topping, known as Misc, installed in 1990, exhausting through Stack 160, capacity: 30 gallons of perchloroethylene per month.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-5(1)]

D.2.1 Lead Emissions [326 IAC 12, (40 CFR Part 60.370 - 60.374, Subpart KK.)]

Pursuant to 40 CFR Part 60.372, the grid casting curing ovens (EU 0200B - E and Maint2000E), the pasting operations (EU 0300A, B, Bn, C - M, 0500E - H and Maint2000F), the three process operations (EU 0700A - E, 0800A - H, K, and Maint2000C & D) and the Central Vac operations (Maint2000B) shall not emit any gases that contain in excess of 0.00044 grains of lead per dry standard cubic foot of exhaust.

D.2.2 Opacity [326 IAC 12, (40 CFR Part 60.370 - 60.374, Subpart KK.)]

Pursuant to 40 CFR Part 60.372, the grid casting curing oven exhaust stacks (226 - 229 and 224), the pasting operations exhaust Stacks (232, 85, 233, 230, 231, 159, 26- 29, 179, 180, 193, 194, 234, 235, 237, 238 and 242), the three process operations exhaust Stacks (127, 152, 151, 175, 130, 140, 166, 142, 176, 177, 188, 167, 141, 244, 130 and 131) and the Central Vac operations exhaust Stack (129) shall be limited to zero (0) percent opacity.

D.2.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]

- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rates from the facilities listed in this section shall not exceed the stated PM emission rates listed in the following table:

Operation	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)
Natural gas-fired grid curing ovens (EU 0200B through EU 0200E) Stacks 226 - 229	3,634 total	6.12 total
Positive lead oxide bulk handling (EU 0300A) Stack 84	1,526	3.42
Positive oxide storage (EU 0300A) Stack 232	2,088	4.22
Negative lead oxide bulk handling (EU 0300B) Stack 85 (0300B)	1,526	3.42
Negative oxide storage (EU 0300Bn) Stack 233	2,016	4.12
Mixing/pasting (EU 0300C) Stack 158	5,675	8.25
Paste mixing system (EU 0300C) Stack 231	6,268	8.81
Expander manufacturing (EU 0300D) Stack 159	312	1.18
Grid pasting (EU 0300 E) Stack 230	11,663	13.4
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	2,012 total	4.12
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193 and 194	2,012 total	4.12
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237 and 238	2,456 total	4.71
3PO-plate processing (0700A) Stack 127	2,914	5.28
3PO-plate processing (0700B) Stack 152	2,914	5.28
3PO-plate processing (0700C) Stack 151	2,914	5.28
3PO-plate processing (0700D) Stack 175	2,754	5.08

Operation	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)
3PO-plate processing (0700E) Stack 175	160	0.755
3PO-L plate assembly (0800A) Stack 140	1,444	3.30
3PO-L plate assembly (0800B) Stack 166	2,165	4.32
3PO-L plate assembly (0800C) Stack 142	2,165	4.32
3PO-MP assembly (0800D) Stack 176	2,404	4.64
3PO-JC/D assembly (0800E) Stack 177	174	0.798
3PO-MCT assembly (0800F) Stack 188	3,813	6.32
3PO-L cell cover insert (0800H) Stack 141	600	1.83
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	1,302	3.08
Tank dry formation (0900A) Stack 178	200	0.877
Tank wet formation (0900B) Fugitive	3,420	5.87
Tank wet formation (0900C) Fugitive	2,215	4.39

- (b) The pounds per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.4 PM [326 IAC 2-2]

To avoid the requirements of 326 IAC 2-2, the hourly PM emissions from the individual emissions units shall not exceed the following:

Operation/Stack ID	Hourly PM Emission Limits (pounds per hour)
Natural gas-fired grid curing ovens (EU 0200B through EU 0200E) Stacks 226 - 229	0.0869 0.0869 0.0869 0.0869
Positive oxide storage (EU 0300A) Stack 232	0.1000
Negative lead oxide bulk handling (EU 0300B) Stack 85 (0300B)	0.0090
Negative oxide storage (EU 0300Bn) Stack 233	0.1201
Paste mixing system (EU 0300C) Stack 231	0.3474
Expander manufacturing (EU 0300D) Stack 159	0.0014
Grid pasting (EU 0300 E) Stack 230	0.3444
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.0310 0.0310 0.0310 0.0310
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193 and 194	0.0310 0.0310 0.0310 0.0310
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237 and 238	0.0378 0.0378 0.0378 0.0378
3PO-plate processing (0700A) Stack 127	0.1698
3PO-plate processing (0700B) Stack 152	0.0565
3PO-plate processing (0700C) Stack 151	0.0565
3PO-plate processing (0700D) Stack 175	0.1605
3PO-plate processing (0700E) Stack 175	0.0092
3PO-L plate assembly (0800A) Stack 140	0.2662

Operation/Stack ID	Hourly PM Emission Limits (pounds per hour)
3PO-L plate assembly (0800B) Stack 166	0.3993
3PO-L plate assembly (0800C) Stack 142	0.0399
3PO-MP assembly (0800D) Stack 176	0.4433
3PO-JC/D assembly (0800E) Stack 177	0.0321
3PO-MCT assembly (0800F) Stack 188	0.7032
3PO-L cell cover insert (0800H) Stack 141	1.19
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.072
Tank dry formation (0900A) Stack 178	0.880
Tank wet formation (0900B) Fugitive	30.1
Tank wet formation (0900C) Fugitive	19.5
Total	55.73

D.2.5 PM₁₀ [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the hourly PM₁₀ emissions from the individual emission units shall not exceed the following:

Operation/Stack ID	Hourly PM₁₀ Emission Limits (pounds per hour)
Natural gas-fired grid curing ovens (EU 0200B through EU 0200E) Stacks 226 - 229	0.0331 0.0331 0.0331 0.0331
Positive oxide storage (EU 0300A) Stack 232	0.0380
Negative lead oxide bulk handling (EU 0300B) Stack 85 (0300B)	0.0034
Negative oxide storage (EU 0300Bn) Stack 233	0.0457

Operation/Stack ID	Hourly PM₁₀ Emission Limits (pounds per hour)
Paste mixing system (EU 0300C) Stack 231	0.1322
Expander manufacturing (EU 0300D) Stack 159	0.0005
Grid pasting (EU 0300 E) Stack 230	0.1311
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.0118 0.0118 0.0118 0.0118
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193 and 194	0.0118 0.0118 0.0118 0.0118
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237 and 238	0.0144 0.0144 0.0144 0.0144
3PO-plate processing (0700A) Stack 127	0.0646
3PO-plate processing (0700B) Stack 152	0.0215
3PO-plate processing (0700C) Stack 151	0.0215
3PO-plate processing (0700D) Stack 175	0.0611
3PO-plate processing (0700E) Stack 175	0.0035
3PO-L plate assembly (0800A) Stack 140	0.1013
3PO-L plate assembly (0800B) Stack 166	0.1520
3PO-L plate assembly (0800C) Stack 142	0.0152
3PO-MP assembly (0800D) Stack 176	0.1687
3PO-JC/D assembly (0800E) Stack 177	0.0122
3PO-MCT assembly (0800F) Stack 188	0.2677

Operation/Stack ID	Hourly PM ₁₀ Emission Limits (pounds per hour)
3PO-L cell cover insert (0800H) Stack 141	0.4528
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.0274
Tank dry formation (0900A) Stack 178	0.3350
Tank wet formation (0900B) Fugitive	11.4555
Tank wet formation (0900C) Fugitive	7.4198
Total	21.215

- (b) Compliance with these PM₁₀ emission limits will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) and 326 IAC 2-2 do not apply.

D.2.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements [326 IAC 2-8-5(a)(1)&(4)] [326 IAC 2-1.1-11]

D.2.7 Testing Requirements [326 IAC 2-8-5(a)(1)&(4)] [326 IAC 2-1.1-11]

Within twelve (12) months after issuance of this permit, the Permittee shall perform lead and opacity testing of one (1) of the stacks in each group as specified in the following table utilizing methods as approved by the Commissioner to demonstrate compliance with the NSPS Subpart KK requirements of Conditions D.2.1 and D.2.2. These lead and opacity performance tests shall be repeated on a different stack for groups with multiple stacks at least once every two and one-half (2.5) years from the date of the last valid compliance demonstration of the group. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.

EMISSION UNITS GROUPED BY LIKE PROCESSES AND COLLECTION EQUIPMENT		
Group	Emission Unit	Stack
4	EU 0200B	226
	EU 0200C	227
	EU 0200D	228
	EU 0200E	229
5	EU 0300A	232
	EU 0300B	85
	EU 0300Bn	233

Group	Emission Unit	Stack
6	EU 0300C	231
7	EU 0300D	159
8	EU 0300E	230
9	EU 0300F	26
	EU 0300G	27
	EU 0300H	28
	EU 0300I	29
10	EU 0300J	179
	EU 0300K	180
	EU 0300L	193
	EU 0300M	194
	EU 0500E	234
	EU 0500F	235
	EU 0500G	237
	EU 0500H	238
11	EU 0700A	127
12	EU 0700B	152
	EU 0700C	151
13	EU0700D and 0700E	175
	EU 0700E	175
14	EU 2000A	113
	EU 2000F	242
	MAINT 2000C	130
	MAINT 2000D	131
	MAINT 2000B	129
15	EU 0800A	140
	EU 0800B	166
16	EU 0800C	142
17	EU 0800D	176
	EU 0800E	177
18	EU 0800F	188
19	EU 0800G	167
	EU 0800K	244
20	EU 0800H	141

The Permittee is not required to test these facilities for PM and PM₁₀ by this permit. However, IDEM may require compliance testing when necessary to determine if these facilities are in compliance. If testing is required by IDEM, compliance with the PM and PM₁₀ limits specified in Conditions D.2.3, D.2.4 and D.2.5 shall be determined by a performance test conducted in accordance with Section

C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-6(1)] [326 IAC 2-8-5(1)]

D.2.8 Particulate Matter (PM)

The PM control devices shall be in operation at all times when any of the facilities listed in Section D.2 are in operation.

D.2.9 Visible Emissions Notations

- (a) Daily visible emission notations of Stack 226 - 229, 232, 85, 233, 158, 231, 159, 230, 26 - 29, 179, 180, 193, 194, 234, 235, 237, 238, 127, 152, 151, 175, 140, 166, 142, 176, 177, 188, 141, 244 and 178 exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.10 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the pasting, three process, and Central Vac operations, at least once per day when the pasting, three process and Central Vac processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses associated these operations shall be maintained within the ranges specified in the following table or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

Emission Unit	S/V ID	Pressure Drop (inches of water)
(EU 0300A)	84	3 - 8
(EU 0300A)	232	1 - 7
(EU 0300B)	85	3 - 8
(EU 0300Bn)	233	1 - 7
(EU 0300D)	159	2 - 7
(EU 0700A)	127	2 - 7
(EU 0700B)	152	2 - 7
(EU 0700C)	151	2 - 7
(EU 0700D)	175	9 - 14
(EU 0700E)	175	9 - 14
(EU 0800A)	140	1 - 6
(EU 0800B)	166	1 - 6
(EU 0800C)	142	5 - 11
(EU 0800D)	176	1 - 7
(EU 0800E)	177	1 - 7
(EU 0800F)	188	1 - 6
(EU 0800H)	141	2 - 6 and 2 - 6
(EU 0800K)	244	6 - 12
(MAINT2000A)	113	6 - 12
(MAINT2000B)	129	6 - 12
(MAINT2000C)	130	6 - 12
(MAINT2000D)	131	6 - 12
(MAINT2000E)	224	6 - 12
(MAINT2000F)	242	6 - 12

- (b) The Permittee shall record the water flow rate of the scrubbers at least once per day when the pasting and formation processes are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the water flow rate shall be maintained within the ranges of water as specified in the following table or water flow rate ranges established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the water flow rate are outside of the above mentioned range for any one reading.

Emission Unit	S/V ID	Pressure Drop (inches of water)	Flow Rate (gallons per minute)
(EU 0300C)	158	8 - 14	9
(EU 0300C)	231	6 - 10	Not Applicable
(EU 0300E)	230	3 - 8	30
(EU 0900A)	178	3 - 8	1.5

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.2.11 Filter Monitoring

Daily inspections shall be performed to verify the placement, integrity and particle loading of the HEPA filters associated with EU 0300A and 0300Bn, exhausting through Stacks 232 and 233. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.2.12 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the battery manufacturing operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.2.13 Scrubber Inspection

An inspection shall be performed each calendar quarter of the scrubber. Defective scrubber part(s) shall be replaced. A record shall be kept of the results of the inspection.

D.2.14 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.2.15 Scrubber Failure Detection

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-8-5(3)] [326 IAC 2-8-19]

D.2.16 Record Keeping Requirements

- (a) To document compliance with Condition D.2.9, the Permittee shall maintain records of daily visible emission notations of Stacks 226 - 229, 232, 85, 233, 158, 231, 159, 230, 26 - 29, 179, 180, 193, 194, 234, 235, 237, 238, 127, 152, 151, 175, 140, 166, 142, 176, 177, 188, 141, 244 and 178 exhausts.
- (b) To document compliance with Condition D.2.10, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Inlet and outlet differential static pressure;
 - (B) Cleaning cycle: frequency and differential pressure, and
 - (C) Water flow rate for the scrubbers.
 - (2) Documentation of all response steps implemented, per event .
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (c) To document compliance with Conditions D.2.11, D.2.12, and D.2.13, the Permittee shall maintain records of the results of the inspections required under Conditions D.2.11, D.2.12 and D.2.13 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: - Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour consisting of fifty-four (54) existing facilities rated at total of 51.85 million British thermal units per hour, including two (2) pasting boilers, exhausting through Stacks 163 and 164, rated at 0.690 and 1.050 million British thermal units per hour, respectively.

Casting

- (1) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 236, rated at 0.340 million British thermal units per hour.

Pasting

- (2) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 239, rated at 0.340 million British thermal units per hour.

Plate Storage Area

- (3) One (1) natural gas-fired universal oven boiler, to be installed, exhausting through Stack 225, rated at 0.340 million British thermal units per hour.

- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-5(1)]**D.3.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]**

Pursuant to 326 IAC 6-2-4 (a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1 (d)), particulate emissions from all facilities used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

D.3.2 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;

- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.3 Volatile Organic Compounds (VOC)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Compliance Determination Requirement [326 IAC 2-8-5(a)(1)&(4)] [326 IAC 2-1.1-11]

D.3.4 Testing Requirements [326 IAC 2-8-5(a)(1)&(4)][326 IAC 2-1.1-11]

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing when necessary to determine if the boilers are in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: C & D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
Mailing Address: 200 West Main Street, Attica, Indiana 47918
FESOP No.: F 045-11285-00008

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: C & D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
Mailing Address: 200 West Main Street, Attica, Indiana 47918
FESOP No.: F 045-11285-00008

This form consists of 2 pages

Page 1 of 2

Check either No. 1 or No.2

- 9** 1. This is an emergency as defined in 326 IAC 2-7-1(12)
The Permittee must notify the Office of Air Management (OAM), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
- 9** 2. This is a deviation, reportable per 326 IAC 2-8-4(3)(C)
The Permittee must submit notice in writing within ten (10) calendar days

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency/Deviation:

Describe the cause of the Emergency/Deviation:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency/deviation:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: C & D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
Mailing Address: 200 West Main Street, Attica, Indiana 47918
FESOP No.: F 045-11285-00008
Facility: Entire Source
Parameter: Total Weight of Lead in Batteries
Limit: 51,031,300 pounds of lead in batteries per twelve (12) consecutive month period

YEAR: _____

Month	Lead in Batteries (pounds)	Lead in Batteries (pounds)	Lead in Batteries (pounds)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY COMPLIANCE MONITORING REPORT**

Source Name: C & D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
Mailing Address: 200 West Main Street, Attica, Indiana 47918
FESOP No.: F 045-11285-00008

Months: _____ **to** _____ **Year:** _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (eg. Permit Condition D.1.3)	Number of Deviations	Date of each Deviation

Form Completed By: _____
Title/Position: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

Source Name:	C & D Technologies, Inc.
Source Location:	200 West Main Street, Attica, Indiana 47918
County:	Fountain
FESOP:	F 045-11285-00008
SIC Code:	3691
Permit Reviewer:	Frank P. Castelli

On April 12, 2000, the Office of Air Management (OAM) had a notice published in the Fountain County Neighbor, Attica, Indiana, stating that C & D Technologies, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a custom industrial battery manufacturing source. The notice also stated that OAM proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP should be issued as proposed.

On May 15, 2000 Charles Frye of C & D Technologies submitted comments on the proposed FESOP. The comments are as follows: The permit language, if changed, has deleted language as ~~strike-outs~~ and new language **bolded**.

Comment 1:

We take exception to the statements made in the second paragraph of the Public Notice signed by Mr. Wagner for Mr. Paul Dubenetzky, and page 8 of 28 of the Technical Support Document. C&D has not constructed or operated dust collectors associated with grid and small parts casting to date and will not begin construction until after the permit is approved. We would like to discuss what options are available to C&D to retract this misstatement from public notice.

Response 1:

The small parts and grid casting operations, known as EU 0100A and EU 0200A, installed in 1977 were not previously permitted by any of the approvals listed on pages 6 and 7 of 28 of the Technical Support Document. IDEM acknowledges that the dust collectors for these two (2) emission units have not been constructed or operated. The TSD should have listed the dust collectors as new equipment. While the TSD is not physically revised, this TSD Addendum acknowledges the correction.

Comment 2:

On page 14 of 28 in the "Technical Support Document" under "State Rule Applicability – Entire Source", the sentence speaking to Preventive Maintenance Plan for non-combustion emission units is not complete in its description of requirements. Please provide a complete description of requirements under 326 IAC 1-6-3.

Response 2:

The TSD did not intentionally indicate the detailed requirements of the Preventive Maintenance Plan because Conditions D.1.6 and D.2.6 require the non-combustion units to have a Preventive Maintenance Plan. The Preventive Maintenance Plan requirements pursuant to 326 IAC 1-6-3 are

listed in detail in Condition B.13 which states:

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

Comment 3:

In Section C.2 – Overall Source Production Limit and in the FESOP Quarterly Report (Page 58 of 59), the Permit speaks to the production-loading limit of 51,031,300 “pounds of lead batteries” per 12 consecutive months. The true designation should be specifically 51,031,600 “pounds of lead in batteries” produced per consecutive 12 months. Please change this wording to reflect the true designation.

Response 3:

Condition C.2(a) and the Quarterly Report Form have been revised as follows to indicate that the throughput limit should be the “lead” in the batteries and not the entire battery:

C.2 Overall Source Production Limit [326 IAC 2-8]

- (a) The production from the entire source is limited to 51,031,300 pounds of lead **in** batteries per twelve (12) consecutive month period.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: C & D Technologies, Inc.
Source Address: 200 West Main Street, Attica, Indiana 47918
Mailing Address: 200 West Main Street, Attica, Indiana 47918
FESOP No.: F 045-11285-00008
Facility: Entire Source
Parameter: ~~Production of~~ **Total Weight of Lead in Batteries**
Limit: 51,031,300 pounds of **lead in** batteries per twelve (12) consecutive month period

YEAR: _____

Month	Lead in Batteries (pounds)	Lead in Batteries (pounds)	Lead in Batteries (pounds)
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Comment 4:

On page 49 of 59 (b) C&D is required to record water flow rate of the scrubbers. Please consider an exception for emission unit (EU0300C), S/V ID158. This scrubber is a Type N ROTOCLONE. Because there is no pump to cause water flow through the scrubber, it can not be equipped with a flow recorder. The use of the magnahelic gauge for monitoring the system should be sufficient.

Response 4:

Condition D.2.10(b) has been revised to eliminate the parametric monitoring of water flow rate for the scrubber associated with EU 0300C and has been indicated as not applicable as follows. Monitoring of the pressure drop will still be required.

D.2.10 Parametric Monitoring

- (b) The Permittee shall record the water flow rate of the scrubbers at least once per day when the pasting and formation processes are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the water flow rate shall be maintained within the ranges of water as specified in the following table or water flow rate ranges established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the water flow rate are outside of the above mentioned range for any one reading.

Emission Unit	S/V ID	Pressure Drop (inches of water)	Flow Rate (gallons per minute)
(EU 0300C)	158	8 - 14	9
(EU 0300C)	231	6 - 10	Not Applicable Unknown
(EU 0300E)	230	3 - 8	30
(EU 0900A)	178	3 - 8	1.5

Comment 5:

C&D Technologies has grouped processes that are essentially the same (like processes) and have identical or very similar control equipment. C&D respectfully requests that these emission units require only one stack test per group to verify compliance for all units within that group. We believe that sampling one operation per group will provide performance information that is representative of our emissions as shown in the following table:

EMISSION UNITS GROUPED BY LIKE PROCESSES AND COLLECTION EQUIPMENT			
Group	Emission Unit	Stack	Description
1	EU 0011A	110/111	OXIDE MILL PRI. & SEC.
2	EU 0100A	195	SLITTER SAW/FLAMING

Group	Emission Unit	Stack	Description
2	EU 0100B	195	SMALL PARTS CASTING
3	EU 0200A	196	GRID CASTING
4	EU 0200B	226	CURING OVEN
4	EU 0200C	227	CURING OVEN
4	EU 0200D	228	CURING OVEN
4	EU 0200E	229	CURING OVEN
5	EU 0300A	232	OXIDE +
5	EU 0300B	85	OXIDE -
5	EU 0300Bn	233	OXIDE -
6	EU 0300C	231	MIXING
7	EU 0300D	159	EXPNDR
8	EU 0300E	230	PASTING
9	EU 0300F	26	HUMIDITY
9	EU 0300G	27	HUMIDITY
9	EU 0300H	28	HUMIDITY
9	EU 0300I	29	HUMIDITY
10	EU 0300J	179	CURING
10	EU 0300K	180	CURING
10	EU 0300L	193	CURING
10	EU 0300M	194	CURING
10	EU 0500E	234	UNIVERSAL
10	EU 0500F	235	UNIVERSAL
10	EU 0500G	237	UNIVERSAL
10	EU 0500H	238	UNIVERSAL
11	EU 0700A	127	Processing 1
12	EU 0700B	152	Processing 2
12	EU 0700C	151	Processing 3
13	EU 0700D	175	Processing 4
13	EU 0700E	175	Processing 4a
14	EU 2000A	113	OXIDE MILL CENTRAL VAC.
14	EU 2000F	242	CENTRAL VAC.
14	MAINT 2000C	130	CENTRAL VAC.
14	MAINT 2000D	131	CENTRAL VAC.
14	MAINT 2000B	129	CENTRAL VAC.
15	EU 0800A	140	L ASM 1
15	EU 0800B	166	L ASM 2
16	EU 0800C	142	L ASM 3

Group	Emission Unit	Stack	Description
17	EU 0800D	176	MP ASM
17	EU 0800E	177	JC/D ASM
18	EU 0800F	188	MCT ASM
19	EU 0800G	167	ADHESIVE
19	EU 0800K	244	LCT 1700
20	EU 0800H	141	REPAIR

Response 5:

IDEM concurs with C & D's recommendations to group the emission units and stack test one (1) of the stacks in each of the emission unit groups. Every 2.5 years, a different stack within each group should be tested. Therefore Conditions D.1.7 and D.2.7 have been revised as follows:

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within twelve (12) months after issuance of this permit, the Permittee shall perform lead and opacity testing of **one (1) of the stacks in each group as specified in the following table** ~~all facilities in Section D.1~~ utilizing methods as approved by the Commissioner to demonstrate compliance with the NSPS Subpart KK requirements of Conditions D.1.1 and D.1.2. These lead and opacity performance tests shall be repeated **on a different stack for groups with multiple stacks** at least once every two and one-half (2.5) years from the date of the last valid compliance demonstration **of the group**. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.

EMISSION UNITS GROUPED BY LIKE PROCESSES AND COLLECTION EQUIPMENT		
Group	Emission Unit	Stack
1	EU 0011A	110/111
2	EU 0100A and 0100B	195
3	EU 0200A	196

The Permittee is not required to test these facilities for PM and PM₁₀ by this permit. However, IDEM may require compliance testing when necessary to determine if these facilities are in compliance. If testing is required by IDEM, compliance with the PM and PM₁₀ limits specified in Conditions D.1.3, D.1.4 and D.1.5 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.7 Testing Requirements [326 IAC 2-8-5(a)(1)&(4)] [326 IAC 2-1.1-11]

Within twelve (12) months after issuance of this permit, the Permittee shall perform lead and opacity testing of **one (1) of the stacks in each group as specified in the following table** ~~all facilities in Section D.2~~ utilizing methods as approved by the Commissioner to demonstrate compliance with the NSPS Subpart KK requirements of Conditions D.2.1 and D.2.2. These lead and opacity performance tests shall be repeated **on a different stack for groups with multiple stacks** at least once every two and one-half (2.5) years from the date of the last valid compliance demonstration **of the group**. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.

EMISSION UNITS GROUPED BY LIKE PROCESSES AND COLLECTION EQUIPMENT		
Group	Emission Unit	Stack
4	EU 0200B	226
	EU 0200C	227
	EU 0200D	228
	EU 0200E	229
5	EU 0300A	232
	EU 0300B	85
	EU 0300Bn	233
6	EU 0300C	231
7	EU 0300D	159
8	EU 0300E	230
9	EU 0300F	26
	EU 0300G	27
	EU 0300H	28
	EU 0300I	29
10	EU 0300J	179
	EU 0300K	180
	EU 0300L	193
	EU 0300M	194
	EU 0500E	234
	EU 0500F	235
	EU 0500G	237
	EU 0500H	238
11	EU 0700A	127
12	EU 0700B	152
	EU 0700C	151
13	EU 0700D and 0700E	175
14	EU 2000A	113
	EU 2000F	242
	MAINT 2000C	130
	MAINT 2000D	131
	MAINT 2000B	129
15	EU 0800A	140
	EU 0800B	166
16	EU 0800C	142

Group	Emission Unit	Stack
17	EU 0800D	176
	EU 0800E	177
18	EU 0800F	188
19	EU 0800G	167
	EU 0800K	244
20	EU 0800H	141

The Permittee is not required to test these facilities for PM and PM₁₀ by this permit. However, IDEM may require compliance testing when necessary to determine if these facilities are in compliance. If testing is required by IDEM, compliance with the PM and PM₁₀ limits specified in Conditions D.2.3, D.2.4 and D.2.5 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Comment 7:

In Section C.7 – Fugitive Lead Dust Emission (a), the permit requires that no outdoor storage of bulk materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles is permissible. C&D considers exterior baghouses and central vacuum systems to be process units and not bulk storage units. We request specific clarification on this point.

Response 7:

Condition C.7(a) states that pursuant to 326 IAC 15-1-3 (Lead emission limitations: control of fugitive lead dust), no source shall create or maintain outdoor storage of bulk materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles.

To clarify the requirements of Condition C.7(a), IDEM concurs that the exterior baghouses and central vacuum systems are indeed process units and not bulk storage units. The exterior baghouses and central vacuum systems are not subject to the requirements cited in Condition C.7(a) and therefore, no changes in any permit conditions or limits are necessary.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD)
for a Federally Enforceable Operating Permit (FESOP)

Source Background and Description

Source Name:	C & D Technologies, Inc.
Source Location:	200 West Main Street, Attica, Indiana 47918
County:	Fountain
SIC Code:	3691
Operation Permit No.:	F 045-11285-00008
Permit Reviewer:	Frank P. Castelli

The Office of Air Management (OAM) has reviewed a FESOP application from C & D Technologies, Inc. relating to the operation of a custom industrial battery manufacturing source.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

Oxide Mill

- (a) One (1) oxide mill, combustion exhausting through Stack 112, consisting of a Barton Pot, known as EU 0011A, equipped with two (2) baghouses in series, known as 011B and 011C, exhausting through Stacks 110 and 111, installed in 1978, last modified May 25, 1978, and 3-process central vac, known as Maint2000A, exhausting through Stack 113, installed in 1980, capacity: 1,800 pounds of lead ingots per hour, limited by the formation bottleneck to 958,964 pounds (73% of capacity) per month.

Casting

- (b) One (1) small parts flaming operation, known as EU 0100B, installed in 1977, last modified October 13, 1977, exhausting through Stack 4, to be exhausted through Stack 195, equipped with a Farr 48D cartridge dust collector, to be installed, capacity: 488 pounds of small parts per hour, limited by the formation bottleneck to 214,851 pounds (60.15% of capacity) per month.

Pasting

- (c) One (1) positive lead oxide bulk handing operation, known as EU 0300A, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting through Stack 84 to be replaced by Stack 232, capacity: 1,526 pounds of positive lead oxide per hour, limited by the formation bottleneck to 689,752 pounds (61.9% of capacity) per month.

- (d) One (1) negative lead oxide bulk handling operation, known as EU 0300B, installed in 1983, last modified June 10, 1983, equipped with a Flex-Kleen Model 84 dust collector, exhausting through Stack 85, capacity: 1,526 pounds of negative lead oxide per hour, limited by the formation bottleneck to 665,336 pounds (59.7% of capacity) per month.
- (e) One (1) mixing/pasting operation, known as EU 0300C, installed in 1982, last modified January 31, 1982, equipped with an AAF rotoclone scrubber, exhausting through Stack 158 to be replaced by Stacks 230 and 231, capacity: 5,675 pounds of positive and negative lead oxide, sulfuric acid/water and grids per hour, limited by the formation bottleneck to 2,443,087 pounds (59.0% of capacity) per month.
- (f) One (1) expander manufacturing operation, known as EU 0300D, installed in 1983, equipped with Farr Model 24 LS dust collector, exhausting through Stack 159, capacity: 312 pounds of lead oxide, carbon black, barytes, and barium sulfate per hour.
- (g) Four (4) humidity ovens, known as EU 0300 F, G, H and I, exhausting through Stacks 26, 27, 28 and 29, respectively, total process capacity: 2,012 pounds of lead plates per hour, limited by the formation bottleneck to 1,255,488 pounds (85.5% of capacity) per month.
- (h) Four (4) natural gas-fired Universal curing ovens, known as EU 0300 J, K, L and M, exhausting through Stacks 179, 180, 193 and 194, respectively, rated at 0.800 million British thermal units per hour each, total process capacity: 2,012 pounds of lead plates per hour, limited by the formation bottleneck to 1,255,488 pounds (85.5% of capacity) per month.

Three Process Operation

- (i) One (1) 3PO-plate processing operation, known as EU 0700A, installed in 1984, last modified August 6, 1984, equipped with Torit dust collector, exhausting through Stack 127, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (j) One (1) 3PO-plate processing operation, known as EU 0700B, installed in 1993, last modified October 26, 1993, equipped with an OSI dust collector, exhausting through Stack 152, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (k) One (1) 3PO-plate processing operation, known as EU 0700C, installed in 1993, last modified October 26, 1993, equipped with an OSI dust collector, exhausting through Stack 151, capacity: 2,914 pounds of plate frames per hour, limited by the formation bottleneck to 1,010,672 pounds (47.5% of capacity) per month.
- (l) One (1) 3PO-plate processing operation, known as EU 0700D, installed in 1995, last modified October 1, 1995, equipped with a Torit dust collector, exhausting through Stack 175, capacity: 2,754 pounds of plate frames per hour limited by the formation bottleneck to 955,409 pounds (47.5% of capacity) per month.
- (m) One (1) 3PO-plate processing operation, known as EU 0700E, installed in 1995, equipped with a Torit dust collector, exhausting through Stack 175, capacity: 160 pounds of plate frames per hour, limited by the formation bottleneck to 55,573 pounds (47.5% of capacity) per month.
- (n) One (1) 3PO-L plate assembly operation, known as EU 0800A, installed March 30, 1984, equipped with an American air filter dust collector, exhausting through Stack 140, capacity:

1,444 pounds of cured plates and small parts per hour, limited by the formation bottleneck to 548,720 pounds (52.1% of capacity) per month.

- (o) One (1) 3PO-L plate assembly operation, known as EU 0800B, installed in 1988, last modified April 8, 1988, equipped with an American air filter dust collector, exhausting through Stack 166, capacity: 2,165 pounds of positive and negative plates and small parts per hour, limited by the formation bottleneck to 822,700 pounds (52.1% of capacity) per month.
- (p) One (1) 3PO-L plate assembly operation, known as EU 0800C, installed in 1984, last modified March 30, 1984, equipped with an OSI #10 dust collector, exhausting through Stack 142, capacity: 2,165 pounds of cured plates and small parts per hour, limited by the formation bottleneck to 822,700 pounds (52.1% of capacity) per month.
- (q) One (1) 3PO-MP assembly, known as EU 0800D, installed in 1993, last modified January 1, 1993, equipped with a Torit dust collector, exhausting through Stack 176, capacity: 2,404 pounds of cured plates and small parts and cell covers per hour, limited by the formation bottleneck to 67,112 pounds (3.8% of capacity) per month and 5.662 liters of cover adhesive per month.
- (r) One (1) 3PO-JC/D assembly, known as EU 0800E, installed in 1994, last modified December 5, 1994, equipped with a Torit dust collector, exhausting through Stack 177, capacity: 174 pounds of cured plates and small parts and cell covers per hour limited by the formation bottleneck to 56,550 pounds per month (44.5% of capacity) and 4.943 liters of cover adhesive per month.
- (s) One (1) 3PO-MCT assembly, known as EU 0800F, installed in 1999, equipped with a Farr 48D dust collector, exhausting through Stack 188, capacity: 3,813 pounds of lead plates and small parts and cell covers per hour, limited by the formation bottleneck to 1,652,300 pounds (59.4% of capacity) per month and 139.875 liters of cover adhesive per month.
- (t) One (1) L-cell cover adhesive station, known as EU 0800G, installed in 1982, exhausting through Stack 167, capacity: 4,000 pounds of L-cells per hour, limited by the formation bottleneck to 2,195,000 pounds of L-cells and covers per month (75.2% of capacity) and 185.5 liters of cover adhesive per month.
- (u) One (1) 3PO-L cell cover insert, known as EU 0800H, installed in 1984, last modified March 30, 1984, equipped with two (2) Torit dust collectors, exhausting through Stack 141, capacity: 600 pounds of assembled cells per hour, limited by the formation bottleneck to 153,600 pounds (35.1% of capacity) per month.

Formation

- (v) One (1) tank dry formation, known as EU 0900A, installed in 1990, last modified March 5, 1990, equipped with a scrubber, exhausting through Stack 178, capacity: 200 pounds of lead plates per hour.
- (w) One (1) tank wet formation, known as EU 0900B, installed in 1990, capacity: 3,420 pounds of dry batteries per hour (fugitive).

Central Vac

- (x) One (1) central vacuum #2, known as Maint2000B, installed October 6, 1980, exhausting through Stack 129.

- (y) One (1) 3 process central vacuum, known as Maint2000C, installed in 1980, exhausting through Stack 130.
- (z) One (1) 3 process central vacuum, known as Maint2000D, installed in 1980, exhausting through Stack 131.
- (aa) One (1) grid casting central vacuum #5, known as Maint2000E, installed November 19, 1999, exhausting through Stack 224.
- (bb) One (1) polyurethane battery topping, known as Misc, installed in 1990, exhausting through Stack 160, capacity: 30 gallons of perchloroethylene per month.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

Casting

- (cc) One (1) small parts casting operation, known as EU 0100A, installed in 1977, equipped with a Farr 48D cartridge dust collector, to be installed, exhausting through Stack 195, capacity: 1,446 pounds of lead pigs per hour, limited by the formation bottleneck to 214,851 pounds (20.3% of capacity) per month.
- (dd) One (1) grid casting operation, known as EU 0200A, installed in 1977, equipped with a Farr 60LL cartridge dust collector, to be installed, exhausting through Stack 196, capacity: 5,197 pounds of lead pigs per hour, limited by the formation bottleneck to 1,886,883 pounds (49.7% of capacity) per month.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11):

- (ee) Four (4) natural gas-fired grid curing ovens, known as EU 0200B through EU 0200E, to be installed, exhausting through Stacks 226 - 229, respectively, rated at 0.140 million British thermal units per hour each, total process capacity: 3,634 pounds of casted lead grid plates per hour, limited by the formation bottleneck to 1,886,884 pounds (71.1% of capacity) per month.
- (ff) One (1) positive oxide storage, known as EU 0300A, equipped with a Pneumatics Bin Vent HEPA filter, to be installed, exhausting through Stack 232, capacity: 2,088 pounds of positive lead oxide per hour, limited by the formation bottleneck to 1,191,581 pounds (78.2% of capacity) per month.
- (gg) One (1) negative oxide storage, known as EU 0300Bn, equipped with a Pneumatics Bin Vent HEPA filter, to be installed, exhausting through Stack 233, capacity: 2,016 pounds of positive lead oxide per hour, limited by the formation bottleneck to 973,728 pounds (66.2% of capacity) per month.
- (hh) One (1) paste mixing system, known as EU 0300C, equipped with a Tri Mer wet scrubber, to be installed, exhausting through Stack 231, capacity: 6,268 pounds of negative and positive lead oxide, expander, and dilute sulfuric acid per hour, limited by the formation bottleneck to 2,150,545 pounds (47.0% of capacity) per month.

- (ii) One (1) grid pasting system, known as EU 0300E, equipped with a Sly Manufacturing scrubber, to be installed, exhausting through Stack 230, capacity: 11,663 pounds of positive and negative lead paste and lead grids per hour, limited by the formation bottleneck to 4,037,854 pounds (47.4%) per month.
- (jj) Four (4) natural gas-fired OSI universal ovens, known as EU 0500E through EU 0500H, to be installed, exhausting through Stacks 234, 235, 237 and 238, respectively, rated at 0.800 million British thermal units per hour each, total process capacity: 2,456 pounds of lead plates per hour, limited by the formation bottleneck to 1,532,544 pounds (85.5% of capacity) per month.
- (kk) One (1) LCT 1700 Assembly with two jigs, known as EU 0800K, to be installed, equipped with a Farr dust collector, exhausting through Stack 244, capacity: 1,302 pounds of plates and small parts and cell covers per hour, limited by the formation bottleneck to 282,100 pounds (29.7% of capacity) per month and 23.8 liters of cover adhesive per month.
- (ll) One (1) tank wet formation, known as 0900C, to be installed, capacity: 2,215 pounds of completed dry cells per hour (fugitive).
- (mm) One (1) pasting central vacuum, known as EU 2000F, to be installed, exhausting through Stack 242.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour consisting of fifty-four (54) existing facilities rated at total of 51.85 million British thermal units per hour, including two (2) pasting boilers, exhausting through Stacks 163 and 164, rated at 0.690 and 1.050 million British thermal units per hour, respectively.

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11). A total of thirteen (13) proposed natural gas-fired combustion facilities rated at total of 7.18 million British thermal units per hour are comprised of the eight (8) natural gas-fired grid curing and universal ovens listed under New Emission Units and the following five (5) new insignificant combustion units:

Casting

- (1) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 236, rated at 0.340 million British thermal units per hour.

Pasting

- (2) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 239, rated at 0.340 million British thermal units per hour.

LCT Assembly

- (3) One (1) natural gas-fired rapid air heater, to be installed, exhausting through Stack 245, rated at 1.650 million British thermal units per hour.

Plate Storage Area

- (4) One (1) natural gas-fired universal oven boiler, to be installed, exhausting through Stack 225, rated at 0.340 million British thermal units per hour.

Charging

- (5) One (1) natural gas-fired rapid air heater, to be installed, exhausting through Stack 243, rated at 0.750 million British thermal units per hour.
- (b) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (d) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (e) Cleaning - alcohol, mineral spirits, parts washer; paint; carbon steel welding. VOC less than 3 pounds per hour or 15 pounds per day, PM less than 5 pounds per hour or 25 pounds per day.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Registration letter, dated January 30, 1980;
- (b) Registered Construction and Operation Status letter, dated October 6, 1980;
- (c) Registered Construction and Operation Status letter, dated May 28, 1982;
- (d) Exempt Construction and Operation Status letter, dated March 11, 1983;
- (e) Registered Construction and Operation Status letter, dated March 29, 1983;
- (f) Exempt Construction and Operation Status letter, dated March 30, 1983;
- (g) Registered Construction and Operation Status letter, dated April 7, 1983;
- (h) Operation Permit #23-05-87-0069, issued August 5, 1983;
- (i) Registered Construction and Operation Status letter, dated July 15, 1983;
- (j) Registered Construction and Operation Status letter, dated February 29, 1984;
- (k) Registered Construction and Operation Status letter, dated May 31 1984;
- (l) Registered Construction and Operation Status letter, dated September 7, 1984;
- (m) Exempt Construction and Operation Status letter, dated October 7 1985;
- (n) Registered Construction and Operation Status letter, dated 10/31/1985;

- (o) Exempt Construction and Operation Status letter, dated February 24, 1987;
- (p) Registered Construction and Operation Status letter, dated April 8, 1988;
- (q) Amendment to Operation Permit # 23-05-87-0069, dated June 3, 1988;
- (r) Registered Construction and Operation Status letter, dated June 30, 1988;
- (s) Amendment to Operation Permit # 23-05-87-0069, dated August 4, 1989;
- (t) Exemption Letter, dated April 5, 1990;
- (u) Construction Permit # 045-2560-90008, issued January 11, 1993;
- (v) Operation Permit Validation Construction Permit # 045-2560-90008, dated June 29, 1993;
- (w) Amendment to Construction Permit # 045-2560-90008, dated December 30, 1993;
- (x) Registered Construction and Operation Status letter # 045-3216-00008, dated October 26, 1993;
- (y) Amendment to Construction and Operation Status #045-3216, dated February 18, 1994;
- (z) Amendment to Construction Permit # 045-2560-90008, dated July 7 1994;
- (aa) Amendment to Construction Permit # 045-2560-90008, dated December 29, 1994;
- (bb) Exempt Construction and Operation Status # 045-8777-00008, dated October 22, 1997;
- (cc) Exempt Construction and Operation Status # 045-9884-00008, dated August 14, 1998;
- (dd) Amendment A-045-10059, to #045-8777-00008, dated October 27, 1998;
- (ee) First Amendment to # 045-9884-00008, dated March 25 1999; and
- (ff) Amendment A 045-11379, to #045-9884-00008, dated October 13, 1999.

All conditions from previous approvals were incorporated into this FESOP except the following:

Condition #3(a) of amendment A-045-10059 to CP 045-8777-00008, dated 10/27/98: This condition stated:

"The Permittee shall take readings of the total static pressure drop across the baghouse, at least once per day. The pressure drop across the baghouse shall be maintained within a pressure drop range of 6 to 10 inches of water. The pressure drop range may be adjusted to incorporate the pressure drop determined by a compliant stack test. If the water pressure falls outside of the determined range, corrective action shall be taken in accordance with the permittee's Preventive Maintenance Plan. The company shall document the cause of the out-of-range reading and take immediate action to correct any problem. Failure or partial failure of the control device shall be reported to the OAM according to the procedure specified for malfunctions in 326 IAC 1-6-2, in which case the provisions of 326 IAC 1-6-5 may apply at the discretion of the OAM."

The condition was not incorporated because the pressure drop range for this baghouse (now EU 0700D, Stack 175) has been revised to 9 to 14 inches of water.

Formation Bottleneck

C & D Technologies, Inc has demonstrated that a bottleneck exists at the source such that certain processes described in the following section should be evaluated for PTE based on this bottleneck. The source has agreed to the throughput limitations based on this formation bottleneck.

All cells leaving the source require charging the plates with an electrical current. This process is referred to as formation. The maximum capacity of formation is the lowest capacity of all the manufacturing processes and requires continuous operation, but additional space and tanks would be required to increase throughput capacity.

There are two types of formation processes: wet formation and dry formation. During formation, the inactive lead oxide-sulfate paste is chemically converted into active electrodes. The plates in contact with a dilute sulfuric acid solution have the positive plates connected to the positive pole of a direct current (DC) source, and the negative plates connected to the negative current of a DC source. In dry formation, the plates are charged before cell assembly and the batteries shipped dry.

In wet formation, the cells are assembled and the sulfuric acid added into the battery before charging in a water cooling tank. Wet formation makes up over 96% of the formation capacity at the source and is the final process before shipping. Because there is no more than 3 - 4 days of storage capacity for any component made at the source and all manufactured components are assembled complete at the source, formation serves as the production bottleneck to all other manufacturing processes and limits their rate of operation.

Research has been conducted on optimizing the rate of charging either by cooling or alloy mixture, and maximum formation capacity is limited to space requirements and cannot be increased without increasing space and water cooling tanks, which are limiting. Emissions of sulfuric acid mist can be controlled to over 80% in wet formation by placing on the acid fill caps during charging. Existing charging capacity is limited to 31,722,900 pounds per year (2,643,575 pounds per month; 1,586,145 Beq per year; 181.06 Beq per hour). This capacity is proposed to be increased to 51,031,300 pounds per year (4,252,608 pounds per month; 2,551,565 Beq per year; 291.27 Beq per hour) and is the "formation bottleneck."

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Stack Summary For Modification

The following stack parameters are listed for the proposed new emission units with stacks:

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
226 - 229	curing ovens EU 0200B, C, D & E	19.0	0.33	1,000	125
230	grid pasting EU 0300E	19.0	0.67	30,000	125
231	paste mixing EU 0300C	19.0	0.67	6,000	80
232 - 233	positive oxide storage EU 0300A & Bn	40.0	0.67	430	100
234 - 235 237 - 238	ovens 0500E, F, G & H	20.0	0.33	1,000	125
242	maint. central vac EU 2000E	15.0	0.33	500	70
244	LCT 1700 assembly EU 0800K	31.0	2.67	24,000	125

Recommendation

The staff recommends to the Commissioner that the FESOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively incomplete FESOP application for the purposes of this review was received on December 28, 1999. Additional information received on February 4 and March 9, 2000 makes the FESOP application administratively complete.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in pages 1 through 3 of Appendix A of this document.

Potential To Emit of This Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls of the previously unpermitted emission units. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. Note since there is an applicable NSPS for lead, the allowable lead emission have been tallied in the following table.

Pollutant	Potential To Emit (tons/year)
PM	38.1
PM ₁₀	38.2
SO ₂	0.019
VOC	0.846
CO	2.64
NO _x	3.15

HAPs	Potential To Emit (tons/year)
Lead	1.50
Methyl Methacrylate	0.673
TOTAL	2.17

Potential To Emit For Entire Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

Pollutant	Potential To Emit (tons/year)
PM	149
PM ₁₀	150
SO ₂	0.155
VOC	9.76
CO	21.7
NO _x	25.8

Note: For the purpose of determining Title V applicability for particulates, PM₁₀, not PM, is the regulated pollutant in consideration.

HAPs	Potential To Emit (tons/year)
Lead	4.132
Methyl Methacrylate	6.06
Perchloroethylene	2.28
Antimony Compounds	0.153
TOTAL	12.6

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM₁₀ is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) This source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict its PTE to below the Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP), pursuant to 326 IAC 2-8.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the FESOP application received December 28, 1999 and contains the most recent emission data.

Pollutant	Actual Emissions (tons/year)
PM	9.19
PM ₁₀	9.19
SO ₂	-
VOC	1.33
CO	-
NO _x	-
HAP	2.58

Source Status For Existing Source

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	5.72
PM ₁₀	7.02
SO ₂	0.136

Pollutant	Emissions (tons/year)
VOC	4.07
CO	19.1
NO _x	22.7

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the calculations provided in detail in Appendix A on pages 1 through 3 of 3.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the modification after controls. The control equipment is considered federally enforceable only after issuance of this FESOP. The proposed emission units and those that were unpermitted are EU 0100A, 0200A-E, 0300A-C & E, 0500E-H, 2000E, 0800K, 0900C, 225, 236, 239, 243 and 245. The total PTE for the modification is listed in the following table:

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	Lead
New & Unpermitted Emission Units	3.34	3.52	0.019	0.373	2.64	3.15	1.50
PSD Threshold Level	250	250	250	250	250	250	25

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Limited Potential to Emit For the Entire Source

The table below summarizes the total potential to emit, reflecting all limits, of all the significant emission units at this source.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Lead Battery Process Operations	8.57	8.57	0.00	3.78	0.00	0.00	7.91

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Combustion (Insignificant Activities)	0.491	1.96	0.155	1.42	21.7	25.8	0.484
Other Insignificant Activities	5.0	5.0	0.00	5.0	0.00	0.00	1.0
Total Emissions	14.1	15.5	2.16	10.2	21.7	25.8	9.39

These emissions reflect the NSPS allowable emission rates for lead and the lead battery formation capacity limit of 51,031,300 pounds of batteries per year.

County Attainment Status

The source is located in Fountain County.

Pollutant	Status
PM ₁₀	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Fountain County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) This source is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.370 - 60.374, Subpart KK. This rule requires that:
- (1) the paste mixing and the three-process operation facilities shall not emit any gases that contain in excess of 0.00044 grains of lead per dry standard cubic foot of exhaust,
 - (2) the grid casting facilities shall not emit any gases that contain in excess of 0.000176 grains of lead per dry standard cubic foot of exhaust,
 - (3) the lead oxide manufacturing facilities shall not emit any gases that contain in excess of 0.010 pounds of lead per ton of lead feed, and
 - (4) the exhaust stacks shall be limited to zero (0) percent opacity.

The information submitted with the application indicates that all emission units comply with the requirements of this NSPS. Stack testing will be required to verify compliance.

- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting (NESHAPs), Subpart X (40 CFR 63.541) because C & D Technologies does not perform any of the activities that are considered secondary lead smelting pursuant to 40 CFR 63.541 and 63.542.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a Preventive Maintenance Plan (PMP) on December 28, 1999. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

All non-combustion emission units and EU 0800G will be required to have

326 IAC 2-2 (Prevention of Significant Deterioration)

This custom industrial battery manufacturing source is a minor PSD source since all criteria pollutants, including lead, are all under the applicable major PSD Threshold Levels. Therefore, the requirements of 326 IAC 2-2 are not applicable to this source.

To assure compliance with 326 IAC 2-2, limited hourly PM emission rates have been calculated for each facility by directly proportioning the controlled PTE of PM of each facility to a total of 55.8 pounds per hour of PM, equivalent to 244.5 tons per year of PM for all significant emission units.

Operation/Stack ID	Potential PM Emission Rate After Controls (pounds per hour)	Hourly PM Emission Limits (pounds per hour)
Oxide Mill (EU 0011A) Stacks 110,111,112	0.00039	0.0106
Small parts flaming (EU 0100 A and B) Stack 195	0.00027	0.0073
Grid casting operation (EU 0200A) Stack 196	0.00176	0.0478
Natural gas-fired grid curing ovens (EU 0200B through EU 0200E) Stacks 226 - 229	0.0032 0.0032 0.0032 0.0032	0.0869 0.0869 0.0869 0.0869
Positive oxide storage (EU 0300A) Stack 232	0.00368	0.1000
Negative lead oxide bulk handling (EU 0300B) Stack 85 (0300B)	0.00033	0.0090

Operation/Stack ID	Potential PM Emission Rate After Controls (pounds per hour)	Hourly PM Emission Limits (pounds per hour)
Negative oxide storage (EU 0300Bn) Stack 233	0.00442	0.1201
Paste mixing system (EU 0300C) Stack 231	0.01279	0.3474
Expander manufacturing (EU 0300D) Stack 159	0.00005	0.0014
Grid pasting (EU 0300 E) Stack 230	0.01268	0.3444
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.00114 0.00114 0.00114 0.00114	0.0310 0.0310 0.0310 0.0310
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193 and 194	0.00114 0.00114 0.00114 0.00114	0.0310 0.0310 0.0310 0.0310
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237 and 238	0.00139 0.00139 0.00139 0.00139	0.0378 0.0378 0.0378 0.0378
3PO-plate processing (0700A) Stack 127	0.00625	0.1698
3PO-plate processing (0700B) Stack 152	0.00208	0.0565
3PO-plate processing (0700C) Stack 151	0.00208	0.0565
3PO-plate processing (0700D) Stack 175	0.00591	0.1605
3PO-plate processing (0700E) Stack 175	0.00034	0.0092
3PO-L plate assembly (0800A) Stack 140	0.0098	0.2662
3PO-L plate assembly (0800B) Stack 166	0.0147	0.3993
3PO-L plate assembly (0800C) Stack 142	0.00147	0.0399

Operation/Stack ID	Potential PM Emission Rate After Controls (pounds per hour)	Hourly PM Emission Limits (pounds per hour)
3PO-MP assembly (0800D) Stack 176	0.01632	0.4433
3PO-JC/D assembly (0800E) Stack 177	0.00118	0.0321
3PO-MCT assembly (0800F) Stack 188	0.02589	0.7032
3PO-L cell cover insert (0800H) Stack 141	0.0438	1.19
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.00265	0.072
Tank dry formation (0900A) Stack 178	0.0324	0.880
Tank wet formation (0900B) Fugitive	1.108	30.1
Tank wet formation (0900C) Fugitive	0.71766	19.5
Total	2.03377	55.8

326 IAC 2-6 (Emission Reporting)

The source located in Fountain County and its potential to emit PM₁₀ is less than one-hundred (100) tons per year and the potential to emit lead is less than five (5) tons per year after the controls and the bottleneck limitation, therefore, 326 IAC 2-6 does not apply.

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, the amount of PM₁₀, SO₂, VOC, CO and NO_x shall be limited to less than one hundred (100) tons per year. In addition, the amount of a single HAP shall be limited to less than ten (10) tons per year and the combination of all HAPs shall be limited to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-7, do not apply.

To assure compliance with 326 IAC 2-8-4, limited hourly PM₁₀ emission rates have been calculated for each facility by directly proportioning the controlled PTE of PM of each facility to a total of 21.24 pounds per hour of PM₁₀, equivalent to 93.04 tons per year of PM₁₀ for all significant emission units.

Operation/Stack ID	Potential PM Emission Rate After Controls (pounds per hour)	Hourly PM ₁₀ Limits (pounds per hour)
Oxide Mill (EU 0011A) Stacks 110,111,112	0.00039	0.0040

Operation/Stack ID	Potential PM Emission Rate After Controls (pounds per hour)	Hourly PM₁₀ Limits (pounds per hour)
Small parts flaming (EU 0100 A and B) Stack 195	0.00027	0.0028
Grid casting operation (EU 0200A) Stack 196	0.00176	0.0182
Natural gas-fired grid curing ovens (EU 0200B through EU 0200E) Stacks 226 - 229	0.0032 0.0032 0.0032 0.0032	0.0331 0.0331 0.0331 0.0331
Positive oxide storage (EU 0300A) Stack 232	0.00368	0.0380
Negative lead oxide bulk handling (EU 0300B) Stack 85 (0300B)	0.00033	0.0034
Negative oxide storage (EU 0300Bn) Stack 233	0.00442	0.0457
Paste mixing system (EU 0300C) Stack 231	0.01279	0.1322
Expander manufacturing (EU 0300D) Stack 159	0.00005	0.0005
Grid pasting (EU 0300 E) Stack 230	0.01268	0.1311
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	0.00114 0.00114 0.00114 0.00114	0.0118 0.0118 0.0118 0.0118
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193 and 194	0.00114 0.00114 0.00114 0.00114	0.0118 0.0118 0.0118 0.0118
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237 and 238	0.00139 0.00139 0.00139 0.00139	0.0144 0.0144 0.0144 0.0144

Operation/Stack ID	Potential PM Emission Rate After Controls (pounds per hour)	Hourly PM₁₀ Limits (pounds per hour)
3PO-plate processing (0700A) Stack 127	0.00625	0.0646
3PO-plate processing (0700B) Stack 152	0.00208	0.0215
3PO-plate processing (0700C) Stack 151	0.00208	0.0215
3PO-plate processing (0700D) Stack 175	0.00591	0.0611
3PO-plate processing (0700E) Stack 175	0.00034	0.0035
3PO-L plate assembly (0800A) Stack 140	0.0098	0.1013
3PO-L plate assembly (0800B) Stack 166	0.0147	0.1520
3PO-L plate assembly (0800C) Stack 142	0.00147	0.0152
3PO-MP assembly (0800D) Stack 176	0.01632	0.1687
3PO-JC/D assembly (0800E) Stack 177	0.00118	0.0122
3PO-MCT assembly (0800F) Stack 188	0.02589	0.2677
3PO-L cell cover insert (0800H) Stack 141	0.0438	0.4528
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	0.00265	0.0274
Tank dry formation (0900A) Stack 178	0.0324	0.3350
Tank wet formation (0900B) Fugitive	1.108	11.4555
Tank wet formation (0900C) Fugitive	0.71766	7.4198
Total	2.03377	21.24

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this

permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

Pursuant to this rule the particulate matter (PM) shall be limited as specified in the following table:

Operation/Stack ID	Process Weight Rate (pounds per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)
Oxide Mill (EU 0011A) Stacks 110,111,112	1,800	3.82	0.00039
Small parts flaming (EU 0100 A and B) Stack 195	1,934	4.01	0.00027
Grid casting operation (EU 0200A) Stack 196	5,197	7.77	0.00176
Natural gas-fired grid curing ovens (EU 0200B through EU 0200E) Stacks 226 - 229	3,634 Total	6.12 total	0.0032 each
Positive lead oxide bulk handling (EU 0300A) Stack 84	1,526	3.42	0.00368
Positive oxide storage (EU 0300A) Stack 232	2,088	4.22	
Negative lead oxide bulk handling (EU 0300B) Stack 85 (0300B)	1,526	3.42	0.00033
Negative oxide storage (EU 0300Bn) Stack 233	2,016	4.12	0.00442
Mixing/pasting (EU 0300C) Stack 158	5,675	8.25	

Operation/Stack ID	Process Weight Rate (pounds per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)
Paste mixing system (EU 0300C) Stack 231	6,268	8.81	0.01279
Expander manufacturing (EU 0300D) Stack 159	312	1.18	0.00005
Grid pasting (EU 0300 E) Stack 230	11,663	13.4	0.01268
Humidity ovens (EU 0300 F, G, H, and I) Stacks 26 - 29	2,012 Total	4.12	0.00114 each
Natural gas-fired Universal curing ovens (EU 0300 J, K, L and M) Stacks 179, 180, 193 and 194	2,012 Total	4.12	0.00114 each
Natural gas-fired OSI Universal ovens (EU 0500E through EU 0500H) Stacks 234, 235, 237 and 238	2,456 total	4.71	0.00139 each
3PO-plate processing (0700A) Stack 127	2,914	5.28	0.00625
3PO-plate processing (0700B) Stack 152	2,914	5.28	0.00208
3PO-plate processing (0700C) Stack 151	2,914	5.28	0.00208
3PO-plate processing (0700D) Stack 175	2,754	5.08	0.00591
3PO-plate processing (0700E) Stack 175	160	0.755	0.00034
3PO-L plate assembly (0800A) Stack 140	1,444	3.30	0.0098
3PO-L plate assembly (0800B) Stack 166	2,165	4.32	0.0147
3PO-L plate assembly (0800C) Stack 142	2,165	4.32	0.00147
3PO-MP assembly (0800D) Stack 176	2,404	4.64	0.01632

Operation/Stack ID	Process Weight Rate (pounds per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)
3PO-JC/D assembly (0800E) Stack 177	174	0.798	0.00118
3PO-MCT assembly (0800F) Stack 188	3,813	6.32	0.02589
3PO-L cell cover insert (0800H) Stack 141	600	1.83	0.0438
LCT 1700 assembly with two jigs (EU 0800K) Stack 244	1,302	3.08	0.00265
Tank dry formation (0900A) Stack 178	200	0.877	0.0324
Tank wet formation (0900B) Fugitive	3,420	5.87	1.108
Tank wet formation (0900C) Fugitive	2,215	4.39	0.71766
Total		142.91	

Although the sum of the allowable PM emissions pursuant to 326 IAC 6-3-2 exceeds 57.1 pounds per hour, equivalent to two hundred fifty (250) tons per year, the source shall not emit PM at a rate of two hundred fifty (250) or more tons per year so that the requirements of 326 IAC 2-2 are not applicable.

These allowable emission rates were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The PM control equipment shall be in operation at all times that the emission units listed in the following table are in operation, in order to comply with these limits.

PM Control Equipment	Emission Units, EU
Baghouses	0011A, 0100A, 0200A, 0300A, B & D, 0700A - E, 0800 A - F, H & K
Scrubber	0300C & E, 0900A,
HEPA Filters	0300A & B
Wet Process	0900B & C

326 IAC 7-1.1 (Sulfur dioxide emission limitations)

Since none of the emission units have the potential to emit sulfur dioxide greater than or equal to twenty-five (25) tons per year or ten (10) pounds per hour, this rule is not applicable to C & D Technologies.

326 IAC 8

No Article 8 rules are applicable to this source since no emission units have the potential to emit VOC of greater than or equal to twenty-five (25) tons per year. The emission units emitting VOC are EU 0800 D - G & K and Misc. The total potential to Emit VOC from these emission units before controls is only 8.34 tons per year.

326 IAC 15-1 (Lead Emission Limitations)

Pursuant to 326 IAC 15-1-2(b)(2) C & D Batteries, Attica shall comply with Subsection (c) and Section 3 of this rule. The C & D battery manufacturing operations are subject to the operation and maintenance programs designed to prevent deterioration to the control equipment performance as specified in 326 IAC 15-1-2(c) and the fugitive dust control measures cited in 326 IAC 15-1-3. The specific rules are as follows:

(a) 326 IAC 15-1-2(c)

Operation and maintenance programs shall be designed to prevent deterioration of control equipment performance. For sources listed in subsections (a)(8) through (b), these programs shall be submitted to the Office of Air Management on or before February 1, 1988. These programs will be incorporated into the individual source operation permits.

(b) 326 IAC 15-1-3 (Lead emission limitations: control of fugitive lead dust)

- (1) No source shall create or maintain outdoor storage of bulk materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles.
- (2) All materials containing more than one percent (1.0%) lead by weight of less than two hundred (200) mesh size particles shall be transported in closed containers or shall be transported by enclosed conveying systems that are vented to the atmosphere through particulate matter control equipment or shall be transported wet.
- (3) Control programs shall be designed to minimize emissions of lead from all non-process fugitive emission points. The programs shall include good housekeeping practices for the cleanup of spills and for minimizing emissions from loading and unloading areas as applicable. For sources listed in section 2 (a)(8) through 2(b) of this rule, these programs shall be submitted to the Department of Environmental Management, Office of Air Management, on or before February 1, 1988. These programs will be incorporated into the individual source operation permits.

State Rule Applicability - Insignificant Activities

326 IAC 6-2-4 (Emission limitations for facilities specified in 326 IAC 6-2-1(c))

The following five natural gas-fired boilers with a total of 2.76 million British thermal units per hour are subject to 326 IAC 6-2-4 and consist of:

- (a) Two (2) pasting boilers, exhausting through Stacks 163 and 164, rated at 0.690 and 1.050 million British thermal units per hour, respectively.
- (b) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 236, rated at 0.340 million British thermal units per hour.
- (c) One (1) natural gas-fired boiler, to be installed, exhausting through Stack 239, rated at 0.340 million British thermal units per hour.
- (d) One (1) natural gas-fired universal oven boiler, to be installed, exhausting through Stack 225, rated at 0.340 million British thermal units per hour.

The boilers, rated at a total of 2.76 million British thermal units per hour, installed and to be installed after September 21, 1983, are subject to the requirements of this rule that limits PM emissions as follows:

$$P_t = \frac{0.87}{Q^{0.26}}$$

Where:

P_t = Pounds of particulate matter emitted per million British thermal units.

Q = Total source maximum operating capacity rating in million British thermal units heat input. The maximum operating capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's operation permit application, except when some lower capacity is contained in the facility's operation permit, in which case, the capacity specified in the operation permit shall be used.

$$P_t = \frac{0.87}{2.76^{0.26}} = 0.668 \text{ but can not exceed 0.6 pounds per million British thermal units}$$

The potential PM emissions of these boilers rated at a total of 2.76 million British thermal units per hour are 0.231 tons per year or 0.0019 pounds per million British thermal units and therefore complies with this rule since it is less than 0.6 million British thermal units.

326 IAC 8-3-2 (Cold Cleaner Operations)

Cold cleaner operations are subject to the requirements of this rule as follows:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

- (a) Cold cleaner operations are subject to the requirements of this rule as follows:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The battery manufacturing operations that have PM emissions controlled by baghouses have applicable compliance monitoring conditions as specified below:
 - (1) Daily visible emissions notations of the baghouse stack exhausts shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
 - (2) The Permittee shall record the total static pressure drop across the baghouses controlling the battery manufacturing operations, at least once daily when the battery manufacturing operations are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the ranges listed in the following table or ranges established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the ranges listed in the following table for any one reading for each baghouse.

Emission Unit	S/V ID	Pressure Drop (inches of water)
(EU 0011A), 011B	110	0.5 - 5
(EU 0011A), 011C	111	0.5 - 5
(EU 0100A)	195	1 - 6
(EU 0200A)	196	1 - 6
(EU 0300A)	84	3 - 8
(EU 0300A)	232	1 - 7
(EU 0300B)	85	3 - 8
(EU 0300Bn)	233	1 - 7
(EU 0300D)	159	2 - 7
(EU 0700A)	127	2 - 7
(EU 0700B)	152	2 - 7
(EU 0700C)	151	2 - 7
(EU 0700D)	175	9 - 14
(EU 0700E)	175	9 - 14
(EU 0800A)	140	1 - 6
(EU 0800B)	166	1 - 6
(EU 0800C)	142	5 - 11
(EU 0800D)	176	1 - 7
(EU 0800E)	177	1 - 7
(EU 0800F)	188	1 - 6
(EU 0800H)	141	2 - 6 and 2 - 6
(EU 0800K)	244	6 - 12
(MAINT2000A)	113	6 - 12
(MAINT2000B)	129	6 - 12
(MAINT2000C)	130	6 - 12
(MAINT2000D)	131	6 - 12
(MAINT2000E)	224	6 - 12
(MAINT2000F)	242	6 - 12

These monitoring conditions are necessary because the baghouses must operate properly to ensure compliance with NSPS Subpart KK, 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

(b) The battery manufacturing operations that have PM emissions controlled by scrubbers have applicable compliance monitoring conditions as specified below:

- (1) Daily visible emissions notations of the scrubber stack exhausts shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
- (2) The Permittee shall record the water flow rate of the scrubbers at least once per day when the battery manufacturing processes are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the water flow rate shall be maintained within the ranges of water as specified in the following table or water flow rate ranges established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the water flow rate are outside of the above mentioned range for any one reading.

Emission Unit	S/V ID	Pressure Drop (inches of water)	Flow Rate (gallons per minute)
(EU 0300C)	158	8 - 14	9
(EU 0300C)	231	6 - 10	unknown
(EU 0300E)	230	3 - 8	30
(EU 0900A)	178	3 - 8	1.5

These monitoring conditions are necessary because the scrubbers must operate properly to ensure compliance with NSPS Subpart KK, 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

(c) The battery manufacturing operations, EU 0300A and 0300Bn, exhausting through Stacks 232 and 233 that have PM emissions controlled by HEPA filters have applicable compliance monitoring conditions as specified below:

- (1) Daily visible emissions notations of the stack exhausts 232 and 233 shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup

or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- (2) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

These monitoring conditions are necessary because the filters must operate properly to ensure compliance with NSPS Subpart KK, 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) FESOP Application Form GSD-08.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations on page 3 of 3 for detailed air toxic calculations.

Conclusion

The operation of this custom industrial battery manufacturing source shall be subject to the conditions of the attached proposed FESOP No.: F 045-11285-00008.

APPENDIX A: EMISSION CALCULATIONS

EXISTING & PROPOSED PM EMISSIONS

TSD App. A page 1 of 3

COMPANY NAME: C & D TECHNOLOGIES, INC.

ADDRESS, CITY, IN ZIP: 200 WEST MAIN STREET, ATTICA, INDIANA 47918

FESOP: F 045-11285-00008

REVIEWER: FRANK P. CASTELLI

DATE: DECEMBER 28, 1999

Process	EU	SV	Mfng Unit	max lbs/hr raw	max lbs/hr fin	% Pb Beq	max Beq/hr	AP-42 LB PM/Beq	% Process Emission	Max TPY Uncontrolled emission	Bottleneck Production Limitation lbs/month	Bottleneck Hour Limitation	Bottleneck Uncontrolled Emission-TPY	% Control Efficiency	Bottleneck Controlled Emission-TPY
OXIDE MILL	0011A	110	BARTON POT	1800	1800	22.55	0.9 t	0.43 lb/t	100	1.690	958964	6393	1.233	99.90	1.23E-03
	0011B	110	BAGHOUSE	1800	1800	22.55	399	0.00011	48	0.092	958964	6393	0.067	99.9	6.73E-05
	0011C	111	BAGHOUSE	1800	1800	22.55	399	0.00011	48	0.092	958964	6393	0.067	99.9	6.73E-05
	2000A	113	CENTRAL		0	0	399	0.00011	4	0.008	0	3200	0.003	99	2.81E-05
TOTAL EMISSION FROM OXIDE MILL PROCESS										1.882			1.371		1.40E-03
SP CASTING	0100A/B	195	S P	1446	1446	5.05	1431	0.00019	100	1.180	214851	1783	0.240	99.9	2.40E-04
TOTAL EMISSION FROM SMALL PARTS CASTING PROCESS										1.180			0.240		2.40E-04
Grid Casting	0200A	196	GRID	5197	5197	44.37	586	0.00313	96	7.708	1886883	4356	3.833	99.9	3.83E-03
	0200B	226	CURING	908	908	44.37	102	0.00313	1	0.014	471721	6234	0.010	0	9.98E-03
	0200C	227	CURING	908	908	44.37	102	0.00313	1	0.014	471721	6234	0.010	0	9.98E-03
	0200D	228	CURING	909	909	44.37	102	0.00313	1	0.014	471721	6227	0.010	0	9.98E-03
	0200E	229	CURING	909	909	44.37	102	0.00313	1	0.014	471721	6227	0.010	0	9.98E-03
	2000E	224	CENTRAL VAC		0	0	586	0.00313	3	0.241	0	3200	0.088	99.97	2.64E-05
TOTAL EMISSION FROM GRID CASTING PROCESS										8.005			3.961		4.38E-02
PASTING	0300A	232	OXIDE+	2088	2088	28.02	373	0.0043	23	1.614	1191581	6848	1.262	99.00	1.26E-02
	0300B	233	OXIDE-	2016	2016	22.55	447	0.0043	23	1.936	479482	2854	0.631	99.00	6.31E-03
	0300Ba	85	OXIDE-	1526	1526	22.55	338	0.0043	23	1.466	479482	3770	0.631	99.90	6.31E-04
	0300C	231	MIXING	6268	6268	50.57	620	0.0043	24	2.801	2150545	4117	1.317	98.00	2.63E-02
	0300D	159	EXPNDR	312	312	5.37	291	0.0043	1	0.055	227760	8760	0.055	99.60	2.19E-04
	0300E	230	PASTING	11663	11663	94.95	614	0.0043	24	2.776	4037854	4155	1.317	98.00	2.63E-02
	0300F	26	HUMIDITY	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0300G	27	HUMIDITY	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0300H	28	HUMIDITY	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0300I	29	HUMIDITY	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0300J	179	CURING	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0300K	180	CURING	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0300L	193	CURING	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0300M	194	CURING	503	503	94.95	26	0.0043	1	0.005	313872	7488	0.004	0.00	4.27E-03
	0500E	234	UNIVERSAL	614	614	94.95	32	0.0043	1	0.006	383136	7488	0.005	0	5.21E-03
	0500F	235	UNIVERSAL	614	614	94.95	32	0.0043	1	0.006	383136	7488	0.005	0	5.21E-03
	0500G	237	UNIVERSAL	614	614	94.95	32	0.0043	1	0.006	383136	7488	0.005	0	5.21E-03
	0500H	238	UNIVERSAL	614	614	94.95	32	0.0043	1	0.006	383136	7488	0.005	0	5.21E-03
	2000F	242	CENTRAL	0	0	0	400	0.0043	4	0.301	0	3200	0.110	99.00	1.10E-03
TOTAL EMISSION FROM PASTING/MIXING PROCESS										11.014			5.38		1.29E-01
3PO	0700A	127	Processing 1	2914	2914	94.95	153	0.0292	46.5	9.126	0		4.338	99.70	1.30E-02
	0700B	152	Processing 2	2914	2914	94.95	153	0.0292	46.5	9.126	0		4.338	99.90	4.34E-03
	0700C	151	Processing 3	2914	2914	94.95	153	0.0292	46.5	9.126	0		4.338	99.90	4.34E-03
	0700D	175	Processing 4	2754	2754	94.95	145	0.0292	46.5	8.625	0		4.101	99.70	1.23E-02
	0700E	175	Processing4a	160	160	94.95	8	0.0292	46.5	0.501	0		0.239	99.70	7.16E-04
	2000C	130	CENTRAL	0	0	0	123	0.0292	5	0.787	0		0.287	99.00	2.87E-03
	0800A	140	L ASM 1	1444	1444	100	72	0.0292	46.5	4.294	0		2.235	99.00	2.24E-02
	0800B	166	L ASM 2	2165	2165	100	108	0.0292	46.5	6.438	0		3.351	99.00	3.35E-02
	0800C	142	L ASM 3	2165	2165	100	108	0.0292	46.5	6.438	0		3.351	99.90	3.35E-03
	0800D	176	MP ASM	2404	2404	100	120	0.0292	46.5	7.148	0		0.273	99.00	2.73E-03
	0800E	177	JC/D ASM	174	174	100	9	0.0292	46.5	0.517	0		0.230	99.00	2.30E-03
	0800F	188	MCT ASM	3813	3813	100	191	0.0292	46.5	11.338	0		6.730	99.00	6.73E-02
	0800K	244	LCT 1700	1302	1302	100	65	0.0292	46.5	3.872	0		1.149	99.7	3.45E-03
	0800G	167	ADHESIVE	0	0	100	200	voc	0	0.000	0		0.00	0.00	0.00E+00
	0800H	141	REPAIR	600	600	100	30	0.0292	5	0.192	0		0.07	0.00	6.71E-02
	2000D	131	CENTRAL	0	0	0	96	0.0292	7	0.859	0		0.31	99.00	3.14E-03
TOTAL EMISSION FROM 3PO PROCESS										78.387			35.343		2.43E-01
	0900A	178	DRY	200	200	100	10	0.0324	100	1.419	0		1.351	90	1.35E-01
	0900B	FUG	WET	3420	3420	100	171	0.0324	100	24.267	0		24.27	80	4.85E+00
	0900C	FUG	WET	2215	2215	100	111	0.0324	100	15.717	1616950	8760	15.72	80	3.14E+00
TOTAL EMISSION FROM FORMATION PROCESS										41.403			41.335		8.13E+00
MAINT	2000B	129	CENTRAL VAC	500 ASCFM X 0.00044 GR/ASCF X 8 PM/PB /100-99% CONTROL EFF						6.600	0		2.410	99.00	2.41E-02
MISC		160	TOPPING			NA		VOC							
TOTAL MAINTENANCE & MISCELLANEOUS EMISSION										6.600			2.410		2.41E-02
TOTAL PROCESS EMISSION TPY - Particulate Matter										148.47			90.04		8.57

EXISTING & PROPOSED LEAD EMISSIONS

APPENDIX A: EMISSION CALCULATIONS

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COMPANY NAME: C & D TECHNOLOGIES, INC.
 ADDRESS, CITY, IN ZIP: 200 WEST MAIN STREET, ATTICA, INDIANA 47918
 FESOP: F 045-11285-00008
 REVIEWER: FRANK P. CASTELLI
 DATE: DECEMBER 28, 1999

Used 0.01lb/ton NSPS allowable for oxide mill
 EUs 0011B and 0011C with a total of 0.9 TPH

Process	EU	SV	Mfng Unit	max Beq/hr	AP-42 LB Pb/Beq	% Process Emission	Gas or air flow rate (acfm)	Uncontrolled grain loading (grains/cu ft)	% Control Efficiency	AP-42 Grain loading of outlet air	Max TPY Controlled Emission	NSPS grain loading (grain/cu ft)	Potential to Emit Pb TPY
OXIDE MILL	0011A	110	BARTON POT	0.9 t	0.44 lb/t	100	10026	0.0046	99.90	4.6E-06	0.00172948		
	0011B	110	BAGHOUSE	399	0.00011	48	5013	0.0005	99.9	4.909E-07	9.227E-05		0.01971
	0011C	111	BAGHOUSE	399	0.00011	48	5013	0.0005	99.9	4.909E-07	9.227E-05		0.01971
	2000A	113	Central Vac	399	0.00011	4	500	0.0004	99.00	4.101E-06	7.69E-05	0.00044	0.00825
TOTAL LEAD EMISSION FROM OXIDE MILL PROCESS											0.001991		0.04767
CASTING	0100A	195	S P	1431	0.0001	100	24000	0.0007	99.9	6.96E-07	0.000627	0.000176	0.1584
TOTAL LEAD EMISSION FROM SMALL PARTS CASTING PROCESS											0.000627		0.1584
Grid Casting	0200A	196	GRID	586	0.0009	96	30000	0.0020	99.9	1.971E-06	0.00221761	0.000176	0.198
	0200B	226	CURING	102	0.0009	1	1000	0.000107222	0	0.00010722	0.00402084	0.00044	0.0165
	0200C	227	CURING	102	0.0009	1	1000	0.000107222	0	0.00010722	0.00402084	0.00044	0.0165
	0200D	228	CURING	102	0.0009	1	1000	0.000107222	0	0.00010722	0.00402084	0.00044	0.0165
	0200E	229	CURING	102	0.0009	1	1000	0.000107222	0	0.00010722	0.00402084	0.00044	0.0165
	2000E	224	Central Vac	586	0.0009	3	500	0.003696019	99.9	3.696E-06	6.93E-05	0.00044	0.00825
TOTAL LEAD EMISSION FROM GRID CASTING PROCESS											0.01837		0.27225
PASTING	0300A	232	OXIDE+	373	0.0025	23	430	0.0583	99.00	0.00058257	0.00939401	0.00044	0.007095
	0300B	233	OXIDE-	447	0.0025	23	430	0.0698	99.00	0.00069815	0.01125769	0.00044	0.007095
	0300Ba	85	OXIDE-	338	0.0025	23	950	0.0239	99.90	2.389E-05	0.00085125	0.00044	0.015675
	0300C	231	MIXING	620	0.0025	24	6000	0.0072	98.00	0.00014483	0.0325872	0.00044	0.099
	0300D	159	EXPNDR	291	0.0025	1	7400	0.0001	99.60	4.593E-07	0.00012746	0.00044	0.1221
	0300E	230	PASTING	614	0.0025	24	30000	0.0014	98.00	2.869E-05	0.03227184	0.00044	0.495
	0300F	26	HUMIDITY	26	0.0025	1	1000	0.0001	0.00	7.735E-05	0.00290066	0.00044	0.0165
	0300G	27	HUMIDITY	26	0.0025	1	1000	0.0001	0.00	7.735E-05	0.00290066	0.00044	0.0165
	0300H	28	HUMIDITY	26	0.0025	1	1000	0.0001	0.00	7.735E-05	0.00290066	0.00044	0.0165
	0300I	29	HUMIDITY	26	0.0025	1	1000	0.0001	0.00	7.735E-05	0.00290066	0.00044	0.0165
	0300J	179	CURING	26	0.0025	1	1000	0.0001	0.00	7.735E-05	0.00290066	0.00044	0.0165
	0300K	180	CURING	26	0.0025	1	1000	0.0001	0.00	7.735E-05	0.00290066	0.00044	0.0165
	0300L	193	CURING	26	0.0025	1	1000	7.7351E-05	0.00	0.00008	0.00290066	0.00044	0.0165
	0300M	194	CURING	26	0.0025	1	1000	7.7351E-05	0.00	0.00008	0.00290066	0.00044	0.0165
	0500E	234	UNIVERSAL	32	0.0025	1	1000	9.344E-05	0.00	9.344E-05	0.003504	0.00044	0.0165
	0500F	235	UNIVERSAL	32	0.0025	1	1000	9.344E-05	0.00	9.344E-05	0.003504	0.00044	0.0165
	0500G	237	UNIVERSAL	32	0.0025	1	1000	9.344E-05	0.00	9.344E-05	0.003504	0.00044	0.0165
	0500H	238	UNIVERSAL	32	0.0025	1	1000	9.344E-05	0.00	9.344E-05	0.003504	0.00044	0.0165
	2000F	242	Central Vac	400	0.0025	4	500	0.009344	99.9	9.344E-06	0.0001752	0.00044	0.00825
TOTAL LEAD EMISSION FROM MIXING/PASTING PROCESS											0.123886		0.952215
3PO	0700A	127	Processing 1	153	0.0106	46.5	9000	0.0098	99.70	2.936E-05	0.00990936	0.00044	0.1485
	0700B	152	Processing 2	153	0.0106	46.5	18700	0.0047	99.90	4.71E-06	0.00330312	0.00044	0.30855
	0700C	151	Processing 3	153	0.0106	46.5	18700	0.0047	99.90	4.71E-06	0.00330312	0.00044	0.30855
	0700D	175	Processing 4	145	0.0106	46.5	9000	0.0093	99.70	2.783E-05	0.00939122	0.00044	0.1485
	0700E	175	Processing4a	8	0.0106	46.5	9000	0.0005	99.70	1.535E-06	0.00051814	0.00044	0.1485
	2000C	130	Central Vac	123	0.0106	5	500	0.0152	99.00	0.00015228	0.00285532	0.00044	0.00825
	0800A	140	L ASM 1	72	0.0106	46.5	10400	0.0040	99.00	3.986E-05	0.01554409	0.00044	0.1716
	0800B	166	L ASM 2	108	0.0106	46.5	10400	0.0060	99.00	5.978E-05	0.02331614	0.00044	0.1716
	0800C	142	L ASM 3	108	0.0106	46.5	8600	0.0072	99.90	7.23E-06	0.00233161	0.00044	0.1419
	0800D	176	MP ASM	120	0.0106	46.5	9000	0.0077	99.00	7.676E-05	0.02590682	0.00044	0.1485
	0800E	177	JC/D ASM	9	0.0106	46.5	9000	0.0006	99.00	5.757E-06	0.00194301	0.00044	0.1485
	0800F	188	MCT ASM	191	0.0106	46.5	24000	0.0046	99.00	4.582E-05	0.04123503	0.00044	0.396
	0800K	244	LCT 1700	65	0.0106	46.5	24000	0.0016	99.90	1.559E-06	0.00140329	0.00044	0.396
	0800G	167	ADHESIVE	200	0	0	3000	0.0000	0.00	0	0	0.00000	0
	0800H	141	REPAIR	30	0.0106	5	2400	0.0008	99.00	7.738E-06	0.00069642	0.00044	0.0396
	2000D	131	Central Vac	96	0.0106	7	500	0.0166	99.00	0.0001664	0.00311996	0.00044	0.00825
TOTAL LEAD EMISSION FROM 3PO PROCESS											0.144777		2.6928
FORMATION	0900A	178	DRY	10	0	100	6000	0.0000	90.00	0.00	0	0	0
	0900B	FUG	WET	171	0	100	0	0.0000	80.00	0.00	0	0	0
	0900C	FUG	WET	111	0	100	0.000	0.000	80.00	0.00	0	0	0
TOTAL LEAD EMISSION FROM FORMATION PROCESS											0		0
MAINT	2000B	129	Central Vac				500	0.0440	99.00	0.00044	0.00825	0.00044	0.00825
MISC		160	TOPPING		voc		0	0.0000	0.00	0	0	0	0
TOTAL MAINTENANCE & MISCELLANEOUS EMISSION											0.00825		0.00825
TOTAL PROCESS EMISSION TPY - LEAD											0.298		4.132

EXISTING & PROPOSED HAPS EMISSIONS

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